AMERICAN ANNALS OF THE DEAF

Official Organ

Conference of Executives of American Schools for the Deaf
Convention of American Instructors of the Deaf

IRVING S. FUSFELD
Editor

POWRIE V. DOCTOR *and* ELIZABETH PEET
Assistant Editors

Under the Direction of

IGNATIUS BJORLEE, of Maryland, 1942
ALFRED L. BROWN, of Colorado, 1942
ELWOOD A. STEVENSON, of California, 1945
CLARENCE J. SETTLES, of Florida, 1945
MRS. H. T. POORE, of Tennessee, 1948
LEONARD M. ELSTAD, of Minnesota, 1948
PERCIVAL HALL, of the District of Columbia, *ex officio*

Executive Committee of the Conference

NOVEMBER
1942

VOLUME 87 NUMBER 5

THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

President .....Percival Hall, *District of Columbia*
Vice President .....A. C. Manning, *Pennsylvania*
Secretary .....Edmund B. Boatner, *Connecticut*
Treasurer..Irving S. Fusfeld, *District of Columbia*
Chairman, Executive Committee
and Committee on Certification .....
.....Ignatius Bjorlee, *Maryland*

The Conference of Executives of American Schools for the Deaf, originally the Conference of Superintendents and Principals of American Schools for the Deaf, was founded in 1868 and subsequently incorporated under the laws of the State of Maryland in 1931. The Conference is an organization of the executive heads of schools for the deaf in the United States and Canada, and has for its object "to promote the management and operation of schools for the deaf along the broadest and most efficient lines and to further and promote the general welfare of the deaf."

THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

President .....Clarence J. Settles, *Florida*
First Vice President ....Leonard M. Elstad, *Minnesota*
Second Vice President .....
.....Jennie M. Henderson, *Massachusetts*
Secretary .....Burton W. Driggs, *Idaho*
Treasurer .....Odie W. Underhill, *North Carolina*
Directors.....
Truman L. Ingle, *Missouri*
Carl E. Rankin, *North Carolina*
Harley D. Drake, *District of Columbia*

The Convention of American Instructors of the Deaf, founded in 1850 and incorporated by act of Congress in 1897, is an organization of educators of the deaf in the United States and Canada with the general object of "promotion of the education of the deaf on the broadest, most advanced, and practical lines," and for that purpose "to secure the harmonious union, in one organization, of all persons actually engaged in educating the deaf in America."

Vol. 87 No. 5

AMERICAN ANNALS OF THE DEAF

Official Organ

Conference of Executives of American Schools for the Deaf
Convention of American Instructors of the Deaf

IRVING S. FUSFELD
Editor

POWRIE V. DOCTOR *and* ELIZABETH PEET
Assistant Editors

Under the Direction of

IGNATIUS BJORLEE, of Maryland, 1942
ALFRED L. BROWN, of Colorado, 1942
ELWOOD A. STEVENSON, of California, 1945
CLARENCE J. SETTLES, of Florida, 1945
MRS. H. T. POORE, of Tennessee, 1948
LEONARD M. ELSTAD, of Minnesota, 1948
PERCIVAL HALL, of the District of Columbia, *ex officio*

Executive Committee of the Conference

NOVEMBER
1942

Contents

POSTPONEMENT OF THE MEETING OF THE CONVENTION .....
To the Members of the Convention of American Instructors of the Deaf .....*C. J. Settles, Ph.D.* 393
Statement of the Executive Committee of the Convention .....*Truman L. Ingle, M.A.* 394

USE OF THE HARVARD READING FILMS WITH PREPARATORY CLASS STUDENTS AT GALLAUDET COLLEGE .....
.....*Margaret Louise Yoder, M.A.* 395
I. The Need, 395; II. The Attempt to Fill the Need with the Harvard Reading Films, 396; III. Results of Use of the Films, 399; IV. Weaknesses in the Technique and Suggestions for Improvement, 405; V. Summary, 407.

USE OF RESIDUAL HEARING .....*Victoria C. Jesseman, M.A.* 408

EDITH M. NELSON .....*Elizabeth Peet, M.A., Ped.D.* 415

THE KINESTHETIC METHOD OF SPEECH DEVELOPMENT AND SPEECH-READING .....*Chester Monroe Shaffer, M.Ed.* 421
Introduction, 421; Speech Procedure, 422; The Kinesthetic Method, 427; Evaluation of the Kinesthetic Method, 437; Summary of Findings, 442.

THE ADULT DEAF OF FRANKLIN COUNTY, OHIO—THEIR EDUCATIONAL BACKGROUND AND INTERESTS—I .....
.....*James Theodore Flood, M.A.* 443
I. Introduction, 443; II. Review of Other Studies, 447; III. Procedures in Planning and Conducting This Survey, 452; IV. Appendix—Questionnaire, 453.

OUR ROLL OF HONOR .....*I. S. F.* 456

MISCELLANEOUS .....*I. S. F.* 458
Seventy-Fifth Anniversary Celebration of the Clarke School, 458; Rudolf Pintner, 458; Certification, 460; Fate of the Philippine School, 460; Community of Interest among the Deaf, 461; A Collection of Railroad Pictures for School Use, 461; Hearing and Automobile Driving, 462; Positions in the Federal Civil Service for the Deaf and the Hard of Hearing, 462; Charts of Sound and Hearing, 463; Phi Delta Kappa, 463; The Fenestration Operation in Otosclerosis, 464; History of the Alabama School, 466; Hearing Survey in Public Schools of Delaware, 467; Spontaneous Lip-Reading, 468; Theater for the Deaf in Spain, 469.

The AMERICAN ANNALS OF THE DEAF is published bi-monthly during the school year, appearing in the months of January, March, May, September, and November. The subscription is $2.00 a year, payable in advance; January number, one dollar a copy; single numbers otherwise, 50 cents each. The subscription for foreign countries is $2.20 a year.

Publication office: 450 Ahnaip Street, Menasha, Wisconsin. Editorial office: Kendall Green, Washington, D.C. Entered as second-class matter at the Postoffice at Menasha, Wisconsin. Acceptance for mailing at the special rate of postage provided for in the act of February 28, 1925, authorized June 25, 1932. Subscriptions made payable to the AMERICAN ANNALS OF THE DEAF may be sent to 450 Ahnaip Street, Menasha, Wisconsin, or to the Editor, Gallaudet College, Kendall Green, Washington, D.C.

GEORGE BANTA PUBLISHING COMPANY, MENASHA, WIS.

AMERICAN ANNALS OF THE DEAF

Vol. 87 NOVEMBER, 1942 No. 5

Postponement of the Meeting of the Convention

TO THE MEMBERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF:

IN CO-OPERATION with the war effort and at the request of the Director of the Transportation Division of the Federal Government, the Executive Committee of the Convention of American Instructors of the Deaf has postponed indefinitely the biennial meeting which was to be held in St. Augustine in 1943.

In the meantime, let us hold fast to the essentials in order that the standards of our schools will not be lowered and educational opportunities for our children be curtailed. Since July, 1940, over three million persons have received training, leading directly to employment in war production. This number will be increased. Thousands of our boys and girls have been trained, placed, and are making significant contributions in essential war industries.

Education is making and must continue to make a substantial contribution to the winning of the war. There must be no blackout in education. Educational opportunities must not be curtailed. In China, after five years of struggle against foreign invasion, there has been no blackout of education. Reliable information tells us that the British education budget has been substantially increased for 1942. Larger grants were provided for war bonuses for teachers, for proper feeding and training of school children, for camps, schools, and for the encouragement of music and arts. We must hold fast to educational essentials.

As soon as the national emergency permits, an announcement will be made regarding the holding of the next meeting of the Convention.

Sincerely yours,

C. J. SETTLES, *President,*
Convention of American Instructors of the Deaf
St. Augustine, Fla.
October 14, 1942

STATEMENT OF THE EXECUTIVE COMMITTEE OF THE CONVENTION

By the unanimous vote of members of the Executive Committee of the Convention of American Instructors of the Deaf, the regular Convention which was scheduled for 1943, at St. Augustine, Florida, has been indefinitely postponed. The present crisis to which is due the existing transportation problem makes it inadvisable to attempt to hold a meeting of this kind until these facilities are again at the normal disposal of the traveling public.

TRUMAN L. INGLE, *Chairman,*
Executive Committee of the Convention
Fulton, Mo.
October 14, 1942

Use of the Harvard Reading Films with Preparatory Class Students at Gallaudet College

MARGARET LOUISE YODER, M.A.
Instructor in English and History, Gallaudet College
Washington, D.C.

I. THE NEED

ACADEMIC learning is based largely upon knowledge found in books, books which are our heritage from the past, and books which bring us the advances in learning which are taking place around us today. The student who wishes to learn French uses a book. The student of Chemistry, Art Appreciation, Astronomy, or Literature has his textbook. How well he learns his Chemistry, Art Appreciation, or Astronomy depends largely upon his ability to transfer the information from the printed pages to his own mind. This transfer is called reading, or in a more concentrated degree, study. Unfortunately students do not all possess the same degree of skill in wresting meanings from the pages of their textbooks. The basic cause of the difference between Bill's "A" and Jack's "F" is likely to be poor reading ability. Even Bill with his "A" may with training increase his ability, for in reading as in other skills, we rarely work up to our maximum efficiency.

In improving the student's reading efficiency two factors are important. First, and most important, is comprehension, understanding of the material he is reading; and second, in a school program with work to be done in a prescribed time, is speed. Later there will be an attempt to show that speed is not only an aim in itself but a definite factor in better comprehension.

If the secondary schools would give training in this skill, it would not be necessary to spend time on it at the college level. At Gallaudet College various testing programs over a number of years have consistently found in the field of reading speed and comprehension that entering students are below the general average for students of their academic

level. The reading program about to be described was carried forward, then, on the assumption that there is a definite need among students in this college for training in reading speed and comprehension in preparation for their success in the academic studies of the college course.

Courses in reading techniques have been given in the college for several years. At the beginning of the school year in 1941 a new technique, the use of the Harvard Reading Films, was introduced. It should be understood that the use of the Harvard Films was but a part of the reading program at Gallaudet. It attracted attention because it was something new, but its real value lies in its use as a part of a complete reading program.

II. The Attempt to Fill the Need with the Harvard Reading Films

1. *Origin.*—The technique about to be discussed was developed at the Psycho-Educational Clinic of the Harvard Graduate School of Education. It has been used as an elective course with Harvard freshman groups for the past four years. The results show that of the students advised to take the training, those who do elect it are more successful in their college work than those who do not.

2. *Equipment.*—The films are used with a 16 mm. projector and a white screen. The projector is placed so that the word images are as small as possible (while still clearly legible) in order to resemble book print. The speed control of the projector enables the operator to control the speed of presentation. At the beginning of the training the film is presented at the rate of 200-250 words per minute. Later presentations are faster until the last film is shown at a speed of about 400 words per minute. (Some students asked that the last ones be shown faster, but the projector used would not present the images faster than 400 words per minute.)

3. *Technique.* The films present in "flashes" groups of words upon the screen. These sections are flashed in a moving sequence across the screen, line after line. The effect is similar to that of reading an unlighted page of print with

the aid of a flashlight, moving the light along as one reads. The phrases of the text are projected in this manner across the screen with the speed and pattern of movement of the eyes of a skilled reader. The poor reader, therefore, in following the flashing movements of the print is actually forced to read with the technique of the skilled reader. Specifically, this method is designed (a) to enlarge the recognition span of the reader and decrease the number of fixation pauses per line; (b) to establish the habit of reading in a regular sequence of pauses from left to right, thus decreasing the number of regressions, and (c) to increase the accuracy of the return sweeps of the eyes. This describes the mechanical effects of the method, but reading is not a purely mechanical activity. It is a thought process. Although establishing correct muscular habits is a beginning step in the improvement of reading, the benefits are not only mechanical. The presentation of word phrases and groups on the screen in logical thought units helps train the student to see related word groups. This is essential in intelligent reading. This can be vividly illustrated in the familiar nursery rhyme:

> Every lady in this land
> Has twenty nails upon each hand
> Five and twenty on hands and feet
> And this is true without deceit.

This makes no sense until we see the logical phrasing of the words. Every lady in this land has twenty nails. Upon each hand five; and twenty on hands and feet, etc. This example shows the necessity for intelligent phrasing of word groups. All reading is a building up of these logical relationships. We begin in grade school learning to see not "c"—"a"—"t," but "cat" in one fixation of the eye. The next step is not to see "Once"—"upon"—"a"—"time," but "Once upon a time," in a single glance. The word groups flashed on the screen in the films train the student in this ability to snatch a single thought, although expressed in a number of words, in a single glance. He *has* to do it because it remains on the screen only for a moment, disappears, and the next thought group in the sentence is flashed to him. He cannot stop and

ponder. He is pulled always forward by the flashing word groups on the screen.

When he has finished the first film selection, he usually has a feeling of weariness. This is because he has not only been putting his eye muscles through a definite corrective exercise, and his mind through a thought exercise, but he has also done perhaps the longest period of pure concentration of his reading experience. The film goes on. There is no glancing out the window, no wondering about this afternoon's baseball game. One moment's turning aside and several precious phrases of the article have flashed by. He must follow each word group on the screen.

Efficient reading is largely dependent upon absolute concentration. The films give excellent training in that skill.

4. *Motivation.*—There is, fortunately, a certain eagerness in new students. They have come to college full of ambition and the will to succeed. It is comparatively easy, then, to interest them in a method of improving their chances for success in college work. They readily understand the basic importance of accurate and efficient reading for academic work. The novelty of the device used is also an excellent motivating force. Too, a knowledge of results gained spurs the student on. His desire to do better today than he did yesterday is one of the best means of improving his reading. For this reason each student keeps a chart of his speed and comprehension score for each selection. The student's comprehension is measured for each selection by means of check questions. These are ten multiple-choice questions of which the first five deal with specific details in the selection, one with the main idea, two with words defined in context, and two with drawing of inferences from the passage read. By keeping an accurate record, the student can not only see the improvement or decrease in his general comprehension, but can diagnose his own particular weakness by discerning if his errors usually fall in the vocabulary questions, details, inferences, or main ideas. By knowing his weakness, he can work to overcome it. The instructor, of course, uses these results to aid her in planning the rest of the remedial program.

5. *Transfer.*—The films are not an end in themselves. The aim is always to establish reading habits through the films which will carry over into the student's daily reading. For this reason, after each training film, there is a period of reading from the printed page. These printed selections are called transfer reading selections. The student 'times" himself on these to discover if his own reading rate is really improving. He also checks his comprehension through comprehension check questions on the transfer selection.

The film speed, student's score on comprehension check questions, transfer speed and transfer comprehension score are all recorded on the student's Diagnostic Chart, which is reproduced on the next page.

There is a chart for each student. These charts were used in computing the averages and results which are discussed in the following section.

III. Results of Use of the Films

1. *Procedure.*—The films were used with the Preparatory Class of Gallaudet College. They were used twice a week for a period of eight weeks during the first term of the school year, 1941-1942. The period was fifty minutes long and the procedure was as follows:

	Approximate time (minutes)
Instructor presents the film	5
Students answer comprehension check questions based on the film	10
Students read transfer reading selection. Instructor marks time every ten seconds on the blackboard.	5
Students answer the comprehension check questions based on the transfer reading selection.	10
Instructor and students correct papers, recording scores	10
Instructor leads general discussion based on errors, implications of the film, vocabulary, etc.	10
Total	50

There are fifteen films in the series, each approximately 1,000 to 1,400 words in length. They are divided into three groups of five each. Group I is the easiest, having a vocabulary difficulty of about grade nine. Group II is more advanced and has vocabulary difficulty of grade eleven. The

NAME ..... CLASS ..... AGE .....

	DIAGNOSTIC FILM COMPREHENSION											EQUATED SELECTION	
	FILM SPEED	DETAILS 1	2	3	4	5	MAIN IDEA 6	VOCAB ULARY 7	8	INFER ENCES 9	10	TOTAL COMP.	SPEED	COMP
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														

FIGURE 1
Diagnostic Chart

last group corresponds in difficulty to grade thirteen. This increase in difficulty should be kept in mind in interpreting the accompanying diagrams.

2. *Results of Films: Speed.*—The film speed was regulated by the operator so that each film was shown at a slightly greater speed than the preceding one. It is important to remember that the reading speed on each film was set by the operator, and was the same for all students, while

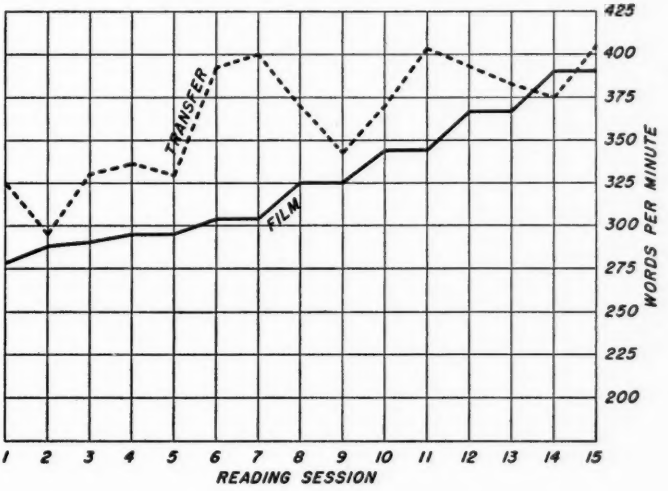


FIGURE 2
Progress in Speed of Reading in Film and Transfer Selections

on the transfer reading selection each student read at his own rate of speed.

The broken line in Fig. 2 indicates the speed of the students' reading on the transfer selection. The speed for each selection on the chart represents the average of the reading speeds of all the preparatory class students on that particular selection. There is, it will be noted, a general increase in transfer speed along with the increase of film speed shown by the solid line. It would seem to indicate that the use of the films actually did affect the students' reading speed on other material. The increase was from approximately 325

words per minute to slightly more than 400 words per minute, or an average increase for the class of almost 100 words per minute.

3. *Results of Films: Comprehension.*—Even more important than speed is comprehension or understanding of material read. Fig. 3 shows the progress made in comprehension on both the film and the transfer reading selection. On the basis of 10 for a perfect score, the class average on the first

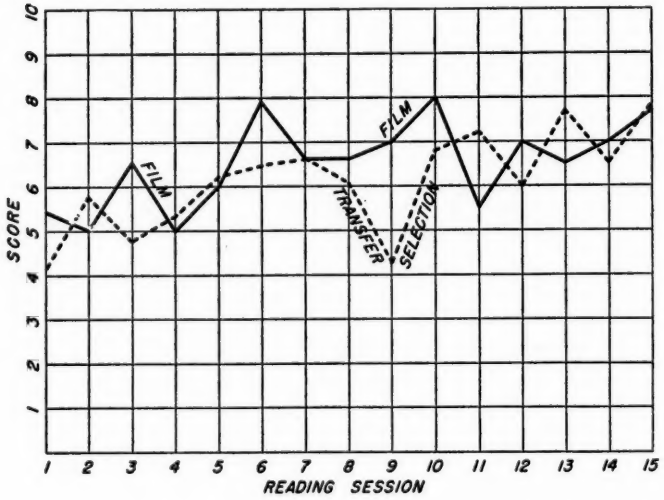


FIGURE 3
Progress in Reading Comprehension in Film and Transfer Selections

film was only 5.4. This low score was probably, in part, caused by the newness of the device used. The average score on the last film was 7.7. A decided drop in score on the eleventh film may be accounted for by the difficulty of the last group of films which had a vocabulary difficulty of 13th grade. After the impact of the first of this group, the students on the whole made steady progress and ended with a comparatively high average.

The transfer reading selections consisted of selections of equal length from chapters of a single book. The vocabulary difficulty was of the 13th grade level throughout. This, in contrast to the increase in vocabulary difficulty of the films,

gave opportunity for objective measurement of improvement in comprehension of reading without the interference of such variables as length, change in subject matter, vocabulary and style. The drop in score on the ninth selection then probably cannot be attributed to any of these factors. The cause may have been an influence outside the control of the instructor, possibly an important football game, the Junior

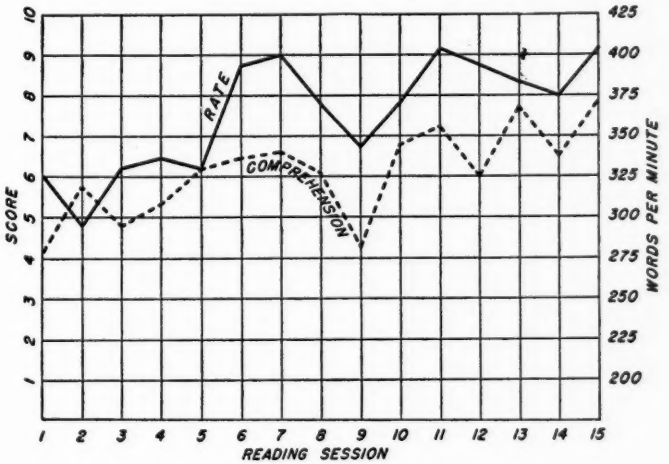


FIGURE 4
Relationship of Progress as Between Rate and Comprehension of Reading in Transfer Selections

Prom, some extreme in temperature of the room, or some unknown factor. Instructors are often unaware of the undercurrents of social or personal excitement which to students are more important than their class work. At any rate, the instructor in this case does not have a record of such influences.

Measuring comprehension on the transfer selections is more valuable than measuring comprehension on the films because in the transfer selection the student is reading material at his own rate of speed. It has already been shown that the student's own rate increased with the speeding up of the films. The dotted line on Fig. 4 will show that his comprehension increased along with his rate of speed. After

the first five selections (which perhaps represent a period of adjustment) the diagram seems to bring out a definite relationship between speed and comprehension. Where the average reading speed is high, the comprehension is high, and where speed is slow, comprehension is poor.

These conclusions are based on diagrams made from averages of scores of all the Preparatory Class students.

TABLE I

SAMPLE DISTRIBUTIONS OF COMPREHENSION SCORES

Score	Film No. 2 No. of Students	Film No. 15 No. of Students	Transfer No. 3 No. of Students	Transfer No. 15 No. of Students
10	1	4		5
9		6	2	7
8	3	13	5	12
7	4	7	6	9
6	8	5	11	4
5	8	3	7	1
4	6	1	2	1
3	5		4	
2	3		2	
1	1			
n =	39	39	39	39
	Mean = 5.02 SD = 1.92	Mean = 7.72 SD = 1.49	Mean = 4.77 SD = 1.79	Mean = 7.82 SD = 1.39

How well these averages represent normal distributions and real progress can be indicated by a few sample distributions. Above are distributions of comprehension scores on two films, and distributions of scores on two transfer reading selections. In each case one distribution has been tabulated from one of the beginning sessions, and one from the last. In the case of the films it is seen that a wide range, but fairly normal distribution early in the training period, becomes a more compact and definitely higher-scoring distribution toward the end of the period. A study of the distributions shows that the averages represent fairly well the general progress of the class. It is not a case of several high scoring or low scoring students producing a spurious effect on the averages. All the students seem to have benefited by the training. In comparing the early scores and distribution with the later scores it is seen that scores of

one, two, or three have disappeared, while scores of eight, nine and ten have become more numerous. The same general shift is evident in the scores on the transfer selections. The Standard Deviations in each case indicate numerically the lowness of variability in the class.

4. *Results of Films: Diagnosis.*—The diagnostic charts, in addition to keeping a record of speed and total comprehension, show how many errors the students make in (a) remembering details, (b) grasping the main idea of the selection, (c) vocabulary, (d) drawing inferences from the material. The averages for the class as a whole were as follows:

Type of Question	*Average Number of Errors on Basis of 10 Questions*
Vocabulary	5.1
Main idea	4.7
Inferences	4.2
Details	3.4

The greatest number of errors was made on the vocabulary questions, and the next greatest on the main idea questions. This knowledge enabled the instructor to plan the rest of the reading program to attempt to remedy this weakness. It is important to remember that the films were used only two days a week. The other three days were devoted to the rest of the English program. It should also be remembered that the films were used for only eight weeks during the first term, leaving the rest of the first term, and the whole of the second and third terms, for other reading exercises, vocabulary work, précis writing, composition, etc.

IV. Weaknesses in the Technique and Suggestions for Improvement

1. *Presentation of the Film.*—At the beginning of this article the importance of word grouping was discussed. The film technique has an excellent opportunity to train the student in this skill. The word groupings actually, however, are sometimes too small, and sometimes not quite logical. One great difficulty in grouping the words in the film presentation is the fact that the lines of print, limited by the size of the screen, are not so long as the lines of print in

ordinary reading matter. This chopping up of lines necessitates more choppy word grouping. There does not seem to be any immediate solution for this difficulty.

The movement of the words across the screen, line after line, establishes a rhythm in the eye movements of the reader. Hop, hop, hop, back. (Next line) Hop, hop, hop, back. And so it goes until the end of the film. Rhythm is important in reading skill just as it is important in swinging an axe or typing with speed. But after this rhythm has been well established on the film, the student is given the transfer reading selection which is printed on large paper with very long lines. He begins, hop, hop, hop, b— but there are still more words in the line. The whole eye movement pattern is disturbed, and he has to adjust to a hop, hop, hop, hop, hop, *back,* and perhaps loses the benefit of the pattern set up by the film. The solution is either to print the transfer selection in lines of approximately the same length as the lines projected on the screen, or to adjust the films to longer lines and a larger screen.

One other difficulty experienced was that in the first few presentations of the film when it was necessary to run the film slowly there was a distracting flickering on the screen. This difficulty may not be encountered with other machines.

2. *Comprehension Check Questions.*—The comprehension check questions on the film, in theory, check the students' understanding in four ways: memory of details, understanding of the main idea, vocabulary, and grasping of inferences. Actually, in many of the questions on inferences or main ideas the wording of the question was such that it was a test, not of the student's understanding of the inferences, but his vocabulary. For example, question nine from the comprehension check questions for film number 12 is:

> In this selection the author's attitude toward man is (a) laudatory; (b) highly critical; (c) tolerant; (d) antagonistic.

In this case those who miss the question may miss it, not because they fail to understand the author's attitude, but because they don't understand the meaning of "laudatory" or "tolerant" or "antagonistic."

The vocabulary difficulty is found scattered throughout the questions, even in the vocabulary questions themselves, in which the choices given are as difficult as the word to be defined:

> The word "inculcate" in the phrase "inculcate upon our student group" means (a) instill; (b) inveigle; (c) infer (d) invigorate.

The student might grasp the meaning of the word "inculcate" from the context of the film and still miss the question because he does not know the meaning of "instill" or "inveigle." The question is, therefore, not a real test of his knowledge of the world "inculcate," just as the other example does not test his understanding of the inferences.

Taking this into consideration it can be seen that the results tabulated for the diagnosis questions are not entirely reliable. They were:

Vocabulary	5.1
Main idea	4.7
Inferences	4.2
Details	3.4

Although this shows that errors were greatest on vocabulary questions, the errors on the other type of questions that were probably caused by vocabulary difficulty should make the vocabulary percentage even higher and the main idea, inferences, and detail errors perhaps even less.

A comparison of the results achieved with the students at Gallaudet College and with hearing groups would be interesting but, unfortunately, no other studies are available at this time. The films were released for use only last fall and Gallaudet College was one of the first centers to use them.

V. Summary

The Harvard Reading Films for the Improvement of Reading were used with the 1941-42 Preparatory Class of Gallaudet College. At the end of an eight-week period the students showed an increase of about 100 words per minute in reading speed. In comprehension, average scores were raised to 77 per cent from 54 per cent. Results show that the students' greatest weakness is in vocabulary.

Use of Residual Hearing

VICTORIA C. JESSEMAN, M.A.
Instructor of Speech, Horace Mann School, Roxbury, Mass.

THE IDEA that a congenitally or adventitiously deaf child may have a remnant of hearing that can be developed by systematic training is not new. Ever since the middle of the eighteenth century adventurous and progressive doctors and teachers of the deaf have made attempts to open an avenue to the mind of those of limited hearing capacity by means of sound. It was found that by using a loud voice close to the ear some deaf persons could learn to interpret vowel sounds and later words, phrases and sometimes sentences. Percussion and musical instruments were used, also, in an attempt to awaken latent hearing. These efforts, however, were intermittent, and because of lack of adequate sound amplification, confined exclusively to the semi-deaf.

Since the invention of the telephone in the latter part of the nineteenth century, continuous experimentation has been carried on seeking a means for bringing speech sounds to deafened ears. In fact, it is well known that Dr. Bell was as much interested in inventing an instrument to aid the deaf as he was in the transmission of sound for the purpose of communication between distant points. The first electrical hearing device, produced about 1900, was built upon the principle of the telephone. Improvements in electrical instruments have kept pace with the development of better transmission and reception in the telephone, and in more recent years, the radio, until now the use of the vacuum tube and crystal microphone for improvement in radio has been applied to hearing aids, also, and with such splendid results that the number of those who can be benefited by electrically amplified sound is greatly increased.

It is no longer, therefore, a question as to whether or not residual hearing should be developed. It is a foregone conclusion that it should be, and that some one of the best type of device for the amplification of sound should be suited to each specific case as an aid in the development of better

speech and understanding of language. It would be doing a great injustice to the deaf child not to make use of any residual hearing he may have, for the following reasons: (1) to develop a natural voice with inflection, accent and rhythm: and (2) to awaken through natural channels a better understanding of language. Development along either of these lines is dependent not so much on the degree of hearing as the type of deafness and mental acuity of the pupil. Hearing to be of use in the acquisition of an understanding of language must be of sufficient degree and within the speech range. Hearing of lesser degree and outside the speech range may be of use, however, in improving the voice. The better voices that can be developed, and the better understanding of language that can be awakened, the more nearly normal the deaf child will be. To this end it is obvious that every means possible should be used.

As soon as it has been determined that a child is deaf, stimulation of what remnant of hearing there may be should be begun. The child may be taught to recognize the different sounds of bells, whistles, clapping of hands at varying distances, or he may be taught to differentiate sounds by listening to the radio. If double ear phones which will amplify sound are attached to the radio, the child may learn to recognize first whether what he hears is music or voice; then to distinguish between singing and speaking; perhaps also whether a man or woman is speaking or singing. In music he will probably learn to recognize different kinds of rhythms.

When the child begins to recognize some differences in sound, voice should be used. The human voice without amplification is the best means of developing a natural speech provided there is hearing enough to respond. If, however, the child does not hear vowel sounds when spoken close to the ear, any device that will amplify the voice sufficiently to convey an idea of its sound will be most helpful. Auditubes of various manufacture amplify the voice enough in some cases to produce normal voices and true vowel sounds. Through an auditube, also, the child may listen to his own voice with pleasure and benefit. If commercial auditubes

are not available, smooth-surfaced paper drinking cups from which the bottom has been removed, or different-sized paper milk bottles may be useful. With the small end applied to the child's ear, the normal voice of parent or teacher applied to the large end is carried directly to the ear, and is amplified sufficiently to make speech more intelligible to one with a limited amount of hearing loss. Various sizes should be tried until the one is found to which the child best responds. Even a pasteboard mailing tube has been used successfully in some cases.

If repeated effort over a period of time of speaking directly into the ear, or by use of any one of the devices mentioned above, gives no or only slight evidence of sound perception, steps should be taken toward securing a properly fitted electrical hearing aid. After examination by a competent otologist and an audiometer test to discover the extent of hearing loss and range of residual hearing, an instrument should be secured suited to the type of deafness which the child has. Here arises the much mooted questions as to the age at which the use of an electrical hearing aid should be begun, and the amount of hearing necessary to benefit by such amplification. For best results systematic stimulation should be started as early as possible, especially from the standpoint of good voice and speech. As soon as it has been determined that the child cannot hear vowel sounds spoken directly into the ear, or through a non-electrical amplifier, even as early as two and a half or three years, he should be supplied with an electrical device, and the extent of deafness should be no deterrent. In the home, or in the school where there is no group instrument, the desk model with double ear phones is preferable for the growing child. At first the periods of listening should be of but a few minutes' duration, but should be repeated at intervals throughout the day, the number of daily repetitions increasing as the ears become accustomed to stimulation. Gradually the length of each period should be increased until the hearing aid can be worn during most of the formal lessons, or at least during the oral lesson periods.

While an important aim in using a hearing aid is to help

the child to understand as much spoken language by means of amplification as his hearing capacity will permit, it is important to keep in mind that the majority of hard-of-hearing or deaf children, especially those in a school for the deaf, will not have sufficient residual hearing to enable them to develop such an understanding of language through the ear as will make them independent of lip-reading. Education of residual hearing, therefore, must be for hearing plus seeing. Incidentally, in such a procedure, lip-reading will be facilitated. Hearing people understand speech better if they are looking at the speaker, especially if the speaker is at a distance. Conversely, the deaf person who can hear the sound of the voice will do better lip-reading than if he can hear no sound. Even the profoundly deaf child who cannot differentiate one vowel sound from another, and yet, by means of some kind of amplification, can hear the sound of the voice, has a better chance for learning good speech than would be the case if he did not have the benefit of even so small an amount of residual hearing. This fact greatly increases the number of those who will be benefited by the use of an electrical hearing aid, and leaves the number of those who cannot be so benefited very small indeed. For those who have the least perceptible amount of hearing, the aim is to convey a mental concept of the human voice which can be imitated for the improvement of voice quality and clarity of speech. Stimulation of the language center of the brain by means of speech sounds will be in proportion to the degree of hearing.

If the pupil has as much as fifty per cent of normal hearing, it is quite probable that he will learn to recognize vowel sounds when pronounced close to the ear with a minimum of practice, provided the residual hearing is within the speech hearing range. He probably will not hear the breath consonants, and will confuse the voiced consonants that are similar, namely, b, d, g; m, n; v, th, etc. However, he will learn words in which these sounds occur, and will in time associate the right consonant sound with certain vowels, such as *b*oy, *g*irl; or he will see the difference between the two by means of lip-reading. While good speech

can be developed in such a case by speaking close to the ear, a hearing aid is advisable in order to facilitate the acquisition of language as well as speech, by means of sound plus lip-reading. This is the type of child that, in some cases, may be able to carry on his education with hearing children, provided a good foundation of speech and an understanding and use of language have been developed before school age, or before he is put into a class with hearing children.

It is impossible to say how much the child with more than fifty per cent loss can learn to hear with the use of a hearing aid; but experience demonstrates that if he can hear something that represents to him a voice, the hearing aid is of value for developing a voice of more nearly normal quality. With such children, therefore, the importance of a hearing aid is one of serviceability as a help in speech building. For this reason all speech drills should be conducted with the help of a hearing aid in order to accomplish the objectives of good speech with the highest degree of efficiency. The deafer the child, the more time and patience will be required to persist in the training of residual hearing, especially if the remnant is small. However, the result will not only repay the effort, but it should be regarded as the right of every deaf child to be given full use of the best that scientific research and intelligent teaching have to offer. Systematic training with the use of a hearing aid, therefore, should be persisted in throughout the school years, even in the case of the profoundly deaf. Surprising results have been attained when this has been done. The procedure for development of hearing in the more profoundly deaf will be the same as for those who have a larger amount of hearing; but the speed and extent of learning will depend upon the amount of hearing and the type of deafness.

Best results are usually obtained by using a low-pitched voice; though, again, the type of deafness will determine the pitch to be used. Speech should be clear, distinct and naturally inflected to prevent monotone, remembering that the child can give back no better speech than that for which he receives the pattern. It also should be slow at the outset, with a pause between each repetition of vowel, word, etc.,

to allow time for the interpretation of sound. Part of the practice for development of residual hearing should be carried on with the child watching the lips as well as listening to the speech through his hearing aid. In this way the eye will be trained to co-operate with the ear in the interpretation of speech sounds, and the mind to subconsciously supplement such sounds as cannot be heard. Tests should be made at intervals for listening without seeing. This makes for closer attention and concentration, and reveals improvement in learning. It is regarded by the child as a game into which he will put his best effort, especially if a score is kept to show his achievement, or the exercise is carried on in competition with others.

As soon as the hearing has been stimulated sufficiently to interpret the vowel sounds of greater intensity, these same vowels should be combined with consonants most easily heard into syllables, and then into words, phrases and simple sentences, at first using a few words combined in as many different ways as possible. When a degree of proficiency has been attained by means of this practice, introduce Mother Goose rhymes, or any short verses for children, choosing those which contain some, at least, of the vowels which have been learned. Let the child watch the lips while listening to these "stories" so that he will learn the consonants not heard; and then let him listen without looking. It is not to be expected that all the words will be heard; but the rhyme should be repeated many times before the child is asked to give it back. Begin by letting him fill in a pause with the correct word, the pause, of course, coming at a familiar word. That is to say, follow as nearly as possible the procedure used in reading to hearing children and helping them to memorize. This, too, not only stimulates the hearing; it makes for concentration, it teaches language sequence, and improves voice quality.

Reading material should be chosen with regard to the child's mental age and interest. Let the child look at the book as you read. If there are pictures, and it is hoped there will be in abundance, point out things of interest and explain them. The child's interest should be kept up, and the

exercises should be stopped before the point of fatigue is reached.

To summarize, it is to the best advantage of the deaf child, both for speech and language development, that full use be made of whatever remnant of hearing he may have, even though tests indicate profound deafness, either by speaking directly into the ear, by using an auditube, or, if there is not enough hearing to make this method serviceable, by means of an electrical hearing aid best suited to the type of deafness.

Edith M. Nelson

ELIZABETH PEET, M.A., PED.D.

Dean of Women and Professor of Languages, Gallaudet College
Washington, D.C.

EDITH M. NELSON was born in St. Paul, Minnesota, on September 26, 1890. She became totally deaf at the age of four years, from unknown causes. She spent two and a half years in the School for the Deaf at Faribault, and the same length of time in the Wisconsin School at Delavan, and then having moved to California with her parents, she entered the School at Berkeley, where she remained until her graduation, four years later. Of the persons who influenced her most in those school days, two seem to stand out—Dr. Warring Wilkinson, the beloved principal of the California School, to whom she frequently alluded, and Dr. William A. Caldwell, to whose skill in instructing her in Latin she felt she owed her own ability to teach that subject in later years.

Owing partly to this thorough grounding in Latin she was admitted to the freshman class of Gallaudet College in 1910. There she spent four happy years, at the end of which she was given the degree of Bachelor of Arts. She was then granted the unusual privilege of becoming a resident student, in course, for the degree of Master of Arts. During this additional year she was closely associated with the members of the Normal Class, taking all courses for which hearing was not a requisite, and doing practice-teaching under the direction of members of the faculty.

On receiving the degree of Master of Arts in 1915, she was appointed teacher in the School for the Deaf, at St. John, Brunswick, Canada, where she remained two years. She then chose the opposite in climate and way of living, when she went to teach in the School for the Deaf, at St. Augustine, Florida. After one year there, she was recalled to Kendall Green, to teach in the Kendall School.

In 1919 her real life-work began with her appointment as librarian of Gallaudet College, a position that she held

until her death. In addition to her duties as librarian, she was for one year instructor in gymnastics to the women students of the college. In 1920, however, she was made instructor of mathematics, which she taught for five years, and was then assigned the subject of Latin. This also, she taught for five years. In 1931 she was promoted to be assistant professor of library science and business practice, and finally in 1939 she was appointed full professor of the same subjects. During all these years she was librarian, and these other subjects have been mentioned in some detail, to show her versatility and industry. For two summers she studied typewriting, business practice and library science at Columbia University. An incident that occurred there is typical of Miss Nelson's perseverance and determination. The instructor of typewriting was dubious as to the advisability of permitting a totally deaf person to enter the class. She explained that the work was not mere copying, but was done from rhythmic dictation. Miss Nelson was an unusually skillful lip-reader, and as she felt she could keep up with the class, she pleaded with the teacher to permit her to enter on trial, promising that if she were the least bit of drag on the class, she would withdraw. The instructor consented, though somewhat reluctantly, it must be said, and Miss Nelson completed the course with success and honor.

As we look back on Miss Nelson's twenty-three years of work in Gallaudet College, two or three things stand out especially—first, her love of books and of reading; second, her willingness and ability to help her students; and third, her tremendous energy and industry. She recatalogued the entire library, spending much more than her allotted time within its walls, making the volumes in it more accessible to the students, and wisely advising all who consulted her as to what and how to read. Faculty and students alike came to her for help. She was alert to the developments of her chosen profession, being a life member of the American Library Association, and subscribing to and diligently reading the various periodicals published in connection with library interests. She was acquainted with

most of the librarians of Washington, and exchanged visits with them, and took her students to visit them. Her personally conducted trips to the Public Library, the Library of Congress, and the Folger Shakespeare Library were eagerly anticipated by her students. She secured from the Public Library and the Library of Congress, the privilege of drawing books on loan to the College Library and to the Kendall School. Once a year she directed a Book Week Program for the Kendall School pupils, in which her own library students took part. But Miss Nelson's interests did not stop with her library and its ramifications. She had her classes in business practice, and she did not confine herself to teaching—there were times when, it is to be feared, she allowed herself to be imposed upon, occasions when last-minute programs or examinations by the faculty had to be mimeographed and no student-helper could be permitted to do the work. She spent hours cleaning and adjusting the typewriters and other machines in her classrooms, put out of kilter by some careless worker. All this activity would have filled another person's days, but Miss Nelson found time for long and conscientious service on key committees of the faculty. She was a member of the Committee on Choice of Studies, and of the Committee on Curriculum, on both of which her opinions carried weight, and thus helped to shape the policy of the college.

Most of all, however, her influence was felt in trying to place her students in positions of responsibility and usefulness for which she had trained them. She never wearied in advising them how to apply for jobs, and she kept in touch with them in later days, being proud and happy to learn of their success. No one will ever know how many needy students and other friends she helped financially. That was a secret locked in her own breast, but it is known that it amounted to a considerable sum.

Last year she undertook a survey of the reading habits of the students, and by means of charts and posters made by students under her direction, she assembled an exhibition which was displayed at the Convention of American Instructors of the Deaf, at Fulton, Missouri. It created

much favorable comment, and was perhaps one of the many reasons why Edith Nelson was given the signal honor of election to the Board of Directors of the Convention. After the Convention this exhibition was taken to the Summer School for teachers of the deaf, held at Jacksonville, Illinois, where an intensive study of it was made in the class for the teaching of reading. Thus we see how her original ideas and influence were not confined to the college walls.

It must not be supposed, however, that her life was "all work and no play." She believed that the deaf in school, both teachers and pupils, needed the broadening experience of contact with the outside world, and that if life was to be enjoyed to the utmost, they should have an appreciation of the points of beauty in it. This was exemplified in her annual trip to Mt. Vernon, with the Preparatory Class, for which careful preparation was made weeks in advance. Intriguing items as well as pictures of Mt. Vernon, were posted on the bulletin boards; there were suggestions for readings as to the early history of Washington's home, and finally there was the exciting sail down the beautiful Potomac River. For many of the students it was the first time they had ever been on a boat, and Miss Nelson's satisfaction in their delight brought real joy to her.

One of her keenest pleasures was her automobile, which she generously shared with her friends. She was seldom seen going out alone—many of the college students had their first glimpses of the beauties of Washington during drives with Miss Nelson. She took long trips in her car every summer, driving as far as California several times, generally accompanied by one of her close friends. Some of her vacation trips took her to the mountains of North Carolina, where she became interested in native handicraft of all sorts. She never failed to bring back examples of the early art of weaving—beautiful blankets and rugs—and specimens of woodwork and hand-made jewelry. Her interest in art extended still further, for she had a large collection of colored prints, often loaned to the class in appreciation of art. She was especially interested in illustrations of

books, choosing certain editions for her personal library because of the artists represented. She enjoyed playing cards, and for many years she and three other women on the campus met at stated intervals to play bridge in the Sand Club—so called from the initials of their last names. One of her special interests was the OWLS, of which she was the official adviser to the college women. The days she passed in helping plan programs and in practising scenes were truly pleasurable to her. She had been national president of the alumnæ OWLS, as well as president of the District of Columbia chapter, and always took great delight in their meetings and in giving generously to their various benevolences. Her friends, both deaf and hearing, were legion. She enjoyed meeting them. And first and last, she was happiest with her books.

It is difficult to realize that we shall never see again the one who had such strength of will and such great energy and enthusiasm as had Edith Nelson. Indeed, it was only her determination and energy that enabled her to continue her work the last three years of her life. Struck down by a mortal disease in the prime of life, she bore untold suffering patiently and heroically. We who lived closest to her were helpless to lessen her pain, but perhaps it was of some comfort to her to know that we were there, willing and anxious to share her burden if that were possible.

When she had made up her mind that she wished to return to her beloved California, she was granted leave of absence from the college, and she hoped her health would improve sufficiently to permit her to resume her work in the fall. Deep within her, however, she knew she could never come back, yet her courage was high and her keen sense of humor remained with her to the last. In the midst of the turmoil of the packing of all her belongings—the accumulations of twenty-three years in one place—and the details involved in settling her business affairs, she laughed and exclaimed, "What a lot of red tape there is to dying!"

Her departure from the college that she had loved and served for so long was like her work and life, courageous and cheerful. Less than one month later, on April 20—

she died at the home of her sister, in Nevada City, California.

She was truly an example of the cultured woman and teacher. As an expression of their esteem, the members of the faculty of Gallaudet College adopted the following minute:

Minute of respect in memory of Professor Nelson, passed by the Faculty of Gallaudet College:

"With profound sorrow the members of the Faculty of Gallaudet College record the death of Miss Edith Maybelle Nelson, on April 20, 1942.

"Miss Nelson faithfully and efficiently served Gallaudet College, as teacher and librarian, for a period of twenty-three years. For an even longer period, she was intimately associated with the life of the campus, as undergraduate and graduate student, and as instructor in the Kendall School.

"She was particularly assiduous in her efforts to increase the facilities of the library, to induce wider reading by the students, and to place students of Library Science and Business Practice in positions they were qualified to fill. That her interests were not limited to the College confines is attested to by her election to membership on the Board of Directors of the Convention of American Instructors of the Deaf.

"In her passing, the College community has lost an earnest worker, a wise counselor of students, and a loyal friend.

Respectfully submitted,

(Signed) H. D. Drake
Elizabeth Peet
Elizabeth Benson, *Committee on Resolutions*"

The Kinesthetic Method of Speech Development and Speech-Reading

CHESTER MONROE SHAFFER, M.ED.
Instructor in the Tennessee School
Knoxville, Tennessee

INTRODUCTION

THE chief purpose of this problem is to place before teachers of speech development and speech-reading for the deaf and hard of hearing an integrated method which, in both time saving and efficiency, the writer believes is superior to any other method in the field up to and including the present time.

This integration, which shall be termed the "Kinesthetic Method," is a combining of the Smith System[1] of speech development with that of a revision of Miss Anna Bunger's development of the Jena Method from the original, formulated by Dr. Karl Brauchmann of Jena, Germany. Formerly speech development and speech-reading were considered as separate subjects. We can imagine the difficulty encountered by the child when confused over a consciousness of tongue positions and the strain of trying to see the movements, which are largely invisible, and at the same time watching the lips, which likewise reveal only a portion of what the speaker expresses. It may never be possible to improve speech-reading systems to the extent that understanding becomes as dependable as through the auditory channel, but through visibility and speech movements together, "guessing" will certainly be reduced to a minimum by the Kinesthetic Method.

Is it any wonder, then, that we reach a height of enthusiasm when we discover that there is a system of kinesthetic speech and also a system of kinesthetic speech-reading whereby we are able to make a combination which dovetails so completely that we are unable to tell where one begins and the other ends? This Kinesthetic Method is one continuous process.

[1] Prepared by Sherman K. Smith, voice specialist, Miami, Fla., and instructor in special education in summer session of the Michigan State Normal College, Ypsilanti, Mich.

Speech Procedure

First, a step-by-step explanation will be given of the Smith System of speech development, which has been adopted by the Tennessee School for the Deaf.

Breath is the basis of all cultivated speech. Since posture plays an important part in the breath pattern, perfect posture, so far as physically possible, should be the first aim.

Exercise for posture: Bend to an angle of forty-five degrees. Let finger tips touch floor. Raise arms above the head. Begin taking in a deep breath as you come to a standing position. With the arms above the head, rock them back of center, exhaling quietly as the arms come to the side maintaining support of the upper chest.

Breathing exercise: Place one hand on the upper chest and the other hand on the diaphragm. Keep your eyes on your hands. Take in and expel short staccato breath. Do not move the upper hand.

The source of all vocal production lies in the buzz of the vocal cords, giving the phonation of short u. This is produced by closing the glottis (bringing together the vocal cords), which offers resistance to the pressure of the air column as the breath is being forced from the lungs. These taut thin muscles (the vocal cords) vibrate somewhat as the lips vibrate in playing a trumpet or bugle.

Since short u is merely the buzz of the vocal cords, its position of resonance rests on the vocal cords (see Figure 1).

The young congenitally deaf child knows nothing concerning voice production beyond its animalistic cough, laugh, or cry; therefore, proceeding from the known to the unknown, the child's attention is drawn to the sensation produced by coughing or laughing. From this a continuing sound is developed.

Figure 1 shows the seven points of resonance within the mould. Starting with the position of the vocal cords, follow the back of the throat to the soft palate, the hard palate, terminate with the back of the upper incisors.

The short "u" produced by the buzz of the vocal cords is the all-important fundamental anchorage of vocal production. Advancing forward in the mould at points equidistant

approximately one inch apart are given consecutively â, ō, ä, e, ē, i, as points of resonance. (The diacritical markings are according to the Thorndike *Dictionary*, which is in common use in the field for the deaf.)

Each of these seven sounds is nothing more than the buzz

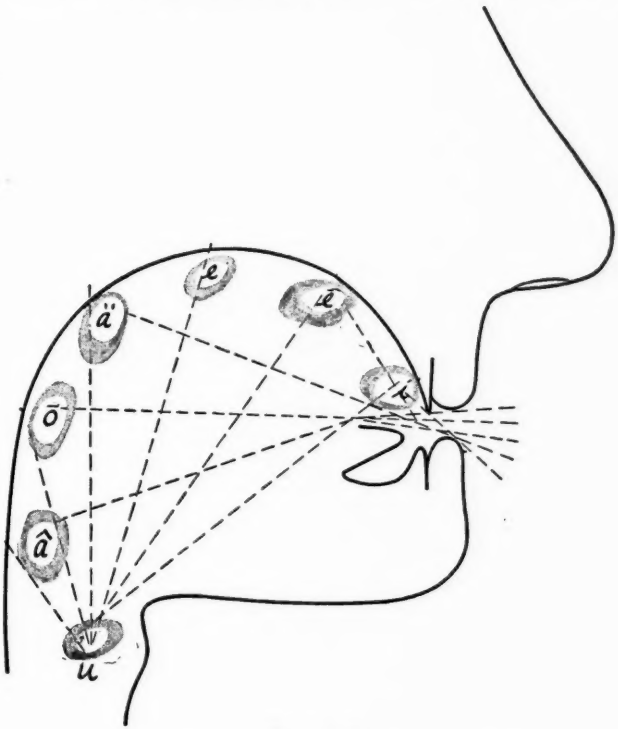


FIGURE 1
The Points of Resonance within the Mould

of the vocal cords varied according to its point of resonance (Figure 1), thus producing these distinct audible sensations for the hearing person and distinct points of tactile sense for the deaf child. It is natural that a breath column striking a certain point and resonating at that point will create a sensation. Kinesthesia, therefore, takes the place of hearing for the deaf, and to the deaf the points of resonance are

transformed into sensation points. For this reason, the deaf child knows whether he is speaking ä or e. This kinesthesia seems apparent from the start with some deaf pupils, while in others it must be developed through training. The angle of the epiglottis determines the point of resonance. The tongue comes into position automatically. This eliminates the necessity of stressing tongue positions.

Procedure.—After a good u has been established, the babbling exercise may be begun. This consists of short u preceded by the consonant b—bubububububu. Continue with the establishing of the points of resonance. Proceed to the â position as shown in Figure 1. The teacher places the point of her finger in that position on the child's profile, and through attempts at recognition of the internal tactile sense, together with imitation of the teacher, the child develops an exact â. This procedure is followed through the seven points.

Caution: The teacher should never tire the child by too long periods and never attempt to teach speech when she cannot be in a cheerful mood. She should be generous with her "pats on the back." She should keep the child happy. She should always encourage him, and drop back to something the child can do easily for ending the period in order that he may leave with a feeling of accomplishment.

The outline of the mould is drawn on the slate and an x is placed at a point of resonance. As each point has been accomplished by the child, the vowel with its diacritical marking representing that position is written at the proper place on the slate; but it is never written or named for the child until he can produce it. The child is taught to write them himself as he learns them and also to point them out in the dictionary.

In some cases it may be easier to establish the points by prefixing the consonant b, as bu followed by bâ, bō, bä, be, bē, bi, later leaving off the b.

After the seven points of resonance have been established, we work for a position midway between u and â, which produces ů (Figure 2) and another position midway between ä and e. This gives us short a. These are rather easily ob-

tained by working forward in the mould from u toward â or backward from â toward u and from ä toward e or back from e toward ä. A forward movement from ō produces ö when the movement is toward the lips, making the upper cavity of the mould a resonance chamber instead of giving it a resonance point placement.

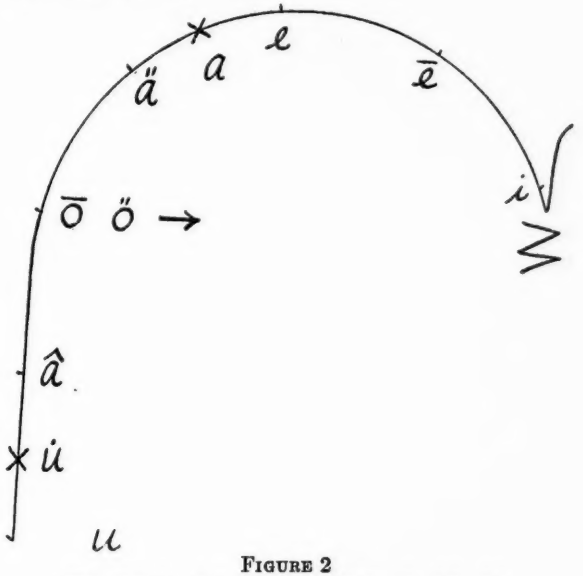


FIGURE 2
The Points of Resonance within the Mould, with Further Explanation

The diphthongs (Figure 3) are pointed out to the deaf child as transitions from one point of resonance to another and usually offer very little difficulty.

oi = transition from â to i (Figure 3, a)
ī = transition from ä to i (Figure 3, b)
ā = transition from e to ē (Figure 3, c)
ū = transition from ē to ö (Figure 3, d)
ou = transition from a to ö (Figure 3, e)

It will be noted that all movements, drills, and exercises are forward in the mould with two exceptions, ū and ou, which are the reverse.

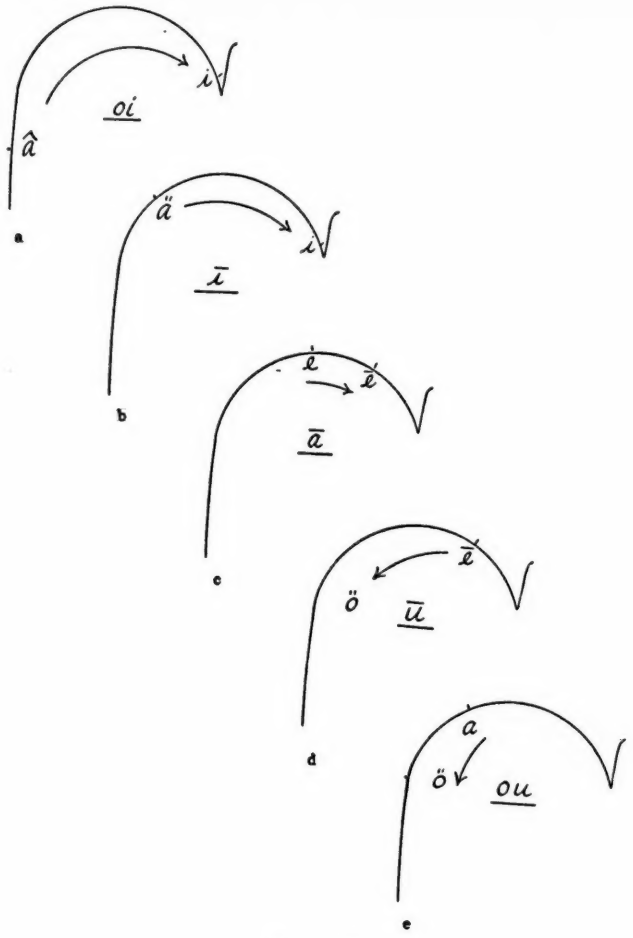


FIGURE 3
Diphthongs

A Brief Statement Concerning the Jena Method.—So far as the writer knows, we do not have an adequate speech-reading system which will fit in with our improved speech system in the Tennessee School for the Deaf, where this study was carried out, or elsewhere. In the past, speech development

and lip-reading were two separate subjects, requiring more time and more effort and giving less results than the integrated method here set forth.

In the old method of lip-reading the pupils were taught to watch intently the movements of the lips and the tongue and any other visible help, as a means of understanding what the speaker was saying and to guess at that portion of speech which was not visible. This led to tenseness and nervousness on the part of the pupil and soon he became discouraged.

The principle of the Jena Method solves our problem. The Jena Method of speech-reading originated in Germany in the town from which it takes its name and under the masterful hands of Karl Brauchmann. Brauchmann's system is not too well known in America, but the general principles have been worked out by Miss Anna Bunger, of Michigan State Normal College, and she has obtained excellent results in teaching the method to the hard of hearing in the department of special education. Miss Bunger, being deaf, has not had the opportunity of teaching speech; therefore, first, she must have pupils with speech established.

The principle of the Jena Method is also kinesthetic. Since only a portion of speech movements are visible, it becomes necessary to have an awareness of the kinesthesia of these movements. For this reason, we use much drill in order that the kinesthesia of speech movements become second nature. In order to avoid tenseness in drill it is necessary to make it free, easy, and entertaining, which is an important point in the original Jena Method.

The Kinesthetic Method

The writer advocates here that speech development and speech-reading should not be considered as two separate subjects, as has been the method in the past. It is for this reason that he presents the integrated Kinesthetic Method, in which speech development and speech-reading become one.

Speech-reading begins with the basic fundamental of voice production of short u, where the child makes his first attempts at phonation and watches the pattern set up by the

teacher. The first visible change in speech-reading is that set up by the lips in the formation of the next position, â. Thus speech-reading begins.

Purpose of the So-called Non-sense Syllable Drills.—

1. We want to be able to produce as nearly as possible every imaginable sound of which the human voice is capable with all possible combinations. After this has been accomplished, speech is at our command.

2. The deaf tell us that, so long as they know what to expect, they can speech-read very well, but as soon as the trend of thought or the subject has been changed, they are lost. Obviously, the so-called non-sense syllables have no meaning as yet, but the speech-reader repeats these drills in unison with the leader. What he is able to say, he will be able to recognize when it has meaning.

3. These drills relieve the child of the tenseness of trying to think of word-formation and word-meaning at the same time, which is a cause of speech disorders in the hearing child.

4. That which at first seems non-sense in the child's mind later rises to a very logical understanding of word formation.

The Kinesthetic Method substitutes the visual and sentient vibration of elements for the auditory wave length of elements in hearing.

The drills as practised in this method are not of the "dry," tense type. While exact, they are free and easy, accompanied by bodily movements, swinging of the arms, clapping of the hands, marching about the room, bouncing balls, nodding or shaking of the head, with conversational accent and rhythm. This all tends toward easy speech and a freedom from all tension. This method is motivated through play activities.

Procedure of the Kinesthetic Method (Follow outline).—

I. First, go through *Exercises for Posture and Breathing,*[2] as described above.

Suggested breathing exercises:

Children march about the room, correlating rhythmical

[2] Diaphragmatic breathing is easily illustrated by comparison with the panting of a dog.

breathing with marching or walking steps, each measuring time by means of arm movements.

Breathing marches:

Exercise 1. Left—inhale
Right—exhale

Exercise 2. Left—inhale, exhale
Right—inhale, exhale

Exercise 3. Left, right—inhale
Left, right—exhale

Exercise 4. Left, right, left, right—inhale
Left, right, left, right—exhale

These exercises tend toward natural breathing. The walking or marching should be free and natural in order to eliminate tension.

In order to control the breathing organ, it must first come under absolute discipline of the mind so that it can become unconscious in the pattern of speech.

Drills on bu are begun as soon as the fundamental has been established.

II. Perfecting points of resonance:

Follow Speech Procedure, indicated above under that heading. From the sensation produced by coughing, work for a continuing buzz of the vocal cords until the child produces an exact short u. Nod or shake your head in response to the child's results. Give all the cheer and encouragement you can but do not say yes until it is exact! After it has been produced once it will be easier a second time. Next touch the child's neck at the position for â and work for a correct â sound. In this manner acquire the sounds in order of their position forward in the mould. The last position, i, is sometimes difficult since its resonance is at the back of the upper incisors but it may be of help to work for short staccato sounds from the ē position.

Drill on these until the child is able to produce the exact sound at the touch of the finger at any of these positions. This takes time with beginners, possibly weeks, but accuracy is absolutely necessary. With some children it is surprisingly easy.

III. Developing Rhythm—The basic drill is built upon the fundamental u preceded by the consonant b. (Avoid the use of drill on "mu" for beginners, since it tends toward nasality; and avoid the early use of drill on "pu" for beginners, since it produces an explosive shock on the vocal cords.)
bububu, bububu, bububu, bububu, bububu.—The comma.

Accent on the basic rhythms:

bubúbubúbubúbubúbubúbubúbubú.
búbubúbubúbubúbubúbubúbubúbu.
bububúbububúbububúbububúbububú.
búbububúbububúbububúbububúbubu.

IV. *Developing Inflection.*—Breath dies away on the period and is marked thus:

bububu, bububububu, bububububu.

Rising inflection is developed by an increase of breath pressure and is marked thus: ?

bububububu?

V. A. Drill for pure tone and consistency.

B. Drill for syllable connection.

C. Begin the series of drills of the points of resonance forward in the mould as they are combined with the various consonants.

D. 1. The ports or dams are practised without voice. This equalizes the breath pressure and the resistance as set up by the lips in the production of P, tongue and hard palate in the production of T, tongue and soft palate in the production of K, and the closed glottis in the production of U, until released in the plosive.

D. 2. This exercise is practised with voice and again gives the forward movement in the mould.

E. The order of the consonant series is given in this section. The first consonants taught to the deaf child are p and

b since, as they are produced on the lips, they are the most visible and the most easily obtained. It is for this reason that the order of the consonants is taught from the front, back. Since "pu" produces an explosive shock on the vocal cords, drill is not emphasized with beginners, but in the production of "bu" phonation has begun before the plosive release and therein voice finds its beauty.

The deaf child develops the various consonants through imitation of the pattern set by the teacher, together with a consciousness of the kinesthesia of that pattern.

Outline of the Kinesthetic Method.—

I. Develop diaphragmatic breathing.
II. Perfect points of resonance.
III. Develop rhythm on bubububububu (shifting accent).
IV. Develop inflection.
V. Drill on the following exercises:

A. bubububububububu
bâbâbâbâbâbâbâbâ
bōbōbōbōbōbōbōbō
bäbäbäbäbäbäbäbä
bebebebebebebebe
bēbēbēbēbēbēbēbē
bibibibibibibibi

The order of The Smith System
u â ō ä e ē i →
û ö a →
oi ī ā →
Exceptions: ← û ou
(w, y, qu, r, use as consonants.)

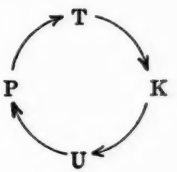
B. bubâ bubâ bubâ bubâ
bâbō bâbō bâbō bâbō
bōbā bōbä bōbä bōbä
bäbe bäbe bäbe bäbe
bebē bebē bebē bebē
bēbi bēbi bēbi bēbi

C. bu bâ bō bä be bē bi (shifting accent and developing the basic rhythms)

D. Ports or dams:
1. P T K U (without voice—shift accent)

T K U P
K U P T
U P T K

or



2. With voice—shift accent.

a) u ku tu pu
â kâ tâ pâ
ō kō tō pō
ä kä tä pä
e ke te pe
ē kē tē pē
i ki ti pi

b) ku tu pu
kâ tâ pâ
kō tō pō
kä tä pä
ke te pe
kē tē pē
ki ti pi

c) ku tu
kâ tâ
kō tō
kä tä
ke te
kē tē
ki ti

d) tu pu
tâ pâ
tō pō
tä pä
te pe
tē pē
ti pi

E. The series for drill (vary the accent, rhythm, and inflection):

pu pâ pō pä pe pē pi
bu bâ bō bä be bē bi
tu tâ tō tä te tē ti
du dâ dō dä de dē di
ku kâ kō kä ke kē ki
gu gâ gō gä ge gē gi
fu fâ fō fä fe fē fi
vu vâ vō vä ve vē vi
thu thâ thō thä the thē thi (unvoiced)
thu thâ thō thä the thē thi (voiced)
su sâ sō sä se sē si
zu zâ zō zä ze zē zi
shu shâ shō shä she shē shi (unvoiced)
shu shâ shō shä she shē shi (voiced)
chu châ chō chä che chē chi
ju jâ jō jä je jē ji
ru râ rō rä re rē ri
lu lâ lō lä le lē li
wu wâ wō wä we wē wi
whu whâ whō whä whe whē whi
mu mâ mō mä me mē mi
nu nâ nō nä ne nē ni
hu hâ hō hä he hē hi
qu quâ quō quä que quē qui
pru prâ prō prä pre prē pri
bru brâ brō brä bre brē bri
tru trâ trō trä tre trē tri
dru drâ drō drä dre drē dri
kru krâ krō krä kre krē kri
gru grâ grō grä gre grē gri
fru frâ frō frä fre frē fri
thru thrâ thrō thrä thre thrē thri
shru shrâ shrō shrä shre shrē shri
spru sprâ sprō sprä spre sprē spri
stru strâ strō strä stre strē stri
scru scrâ scrō scrä scre scrē scri (skr)
plu plâ plō plä ple plē pli
blu blâ blō blä ble blē bli
klu klâ klō klä kle klē kli
glu glâ glō glä gle glē gli
flu flâ flō flä fle flē fli
slu slâ slō slä sle slē sli

splu splå splō splä sple splē spli
swu swå swō swä swe swē swi
smu små smō smä sme smē smi
snu snå snō snä sne snē sni
squ squå squō squä sque squē squi

F. Reverse the vowel and consonant:

up åp ōp äp ep ēp ip
ub åb ōb äb eb ēb ib
ut åt ōt ät et ēt it
ud åd ōd äd ed ēd id
uk åk ōk äk ek ēk ik
ug åg ōg äg eg ēg ig
uf åf ōf äf ef ēf if
uv åv ōv äv ev ēv iv
uth åth ōth äth eth ēth ith
uth åth ōth äth eth ēth ith (voiced)
us ås ōs äs es ēs is
uz åz ōz äz ez ēz iz
ush åsh ōsh äsh esh ēsh ish
ush åsh ōsh äsh esh ēsh ish (voiced)
uch åch ōch äch ech ēch ich
uj åj ōj äj ej ēj ij
ur år ōr är er ēr ir
ul ål ōl äl el ēl il
um åm ōm äm em ēm im
un ån ōn än en ēn in

Combinations preceded by vowels:

ups åps ōps äps eps ēps ips
ubs åbs ōbs äbs ebs ēbs ibs (bz)
uts åts ōts äts ets ēts its
uds åds ōds äds eds ēds ids
uks åks ōks äks eks ēks iks
ugs ågs ōgs ägs egs ēgs igs
ufs åfs ōfs äfs efs ēfs ifs
uves åves ōves äves eves ēves ives (vz)
uths åths ōths äths eths ēths iths
uthes åthes ōthes äthes ethes ēthes ithes (thz)
uls åls ōls äls els ēls ils (lz)
ums åms ōms äms ems ēms ims (mz)
uns åns ōns äns ens ēns ins (nz)
ult ålt ōlt ält elt ēlt ilt
uld åld ōld äld eld ēld ild
ulk ålk ōlk älk elk ēlk ilk
udg ådg ōdg ädg edg ēdg idg (dj)
usts ånts ōnts änts ents ēnts ints
und ånd ōnd änd end ēnd ind
ung ång ōng äng eng ēng ing
ungs ångs ōngs ängs engs ēngs ings (ngz)
unk ånk ōnk änk enk ēnk ink
unks ånks ōnks änks enks ēnks inks

G. Combine ub and bu into ubu series in the following exercises:

1. upu upå upō upä upe upē upi
   ubu ubå ubō ubä ube ubē ubi
   utu utå utō utä ute utē uti

udu udâ udō udä ude udē udi
uku ukâ ukō ukä uke ukē uki
ugu ugâ ugō ugä uge ugē ugi
ufu ufâ ufō ufä ufe ufē ufi
uvu uvâ uvō uvä uve uvē uvi
uthu uthâ uthō uthä uthe uthē uthi
uthu uthâ uthō uthä uthe uthē uthi (voiced)
usu usâ usō usä use usē usi
uzu uzâ uzō uzä uze uzē uzi
ushu ushâ ushō ushä ushe ushē ushi
ushu ushâ ushō ushä ushe ushē ushi (voiced)
uchu uchâ uchō uchä uche uchē uchi
uju ujâ ujō ujä uje ujē uji
uru urâ urō urä ure urē uri
ulu ulâ ulō ulä ule ulē uli
umu umâ umō umä ume umē umi
unu unâ unō unä une unē uni

2. âpu âpâ âpō âpä âpe âpē âpi
âbu âbâ âbō âbä âbe âbē âbi
âtu âtâ âtō âtä âte âtē âti
âdu âdâ âdō âdä âde âdē âdi
âku âkâ âkō âkä âke âkē âki
âgu âgâ âgō âgä âge âgē âgi
âfu âfâ âfō âfä âfe âfē âfi
âvu âvâ âvō âvä âve âvē âvi
âthu âthâ âthō âthä âthe âthē âthi
âthu âthâ âthō âthä âthe âthē âthi (voiced)
âsu âsâ âsō âsä âse âsē âsi
âzu âzâ âzō âzä âze âzē âzi
âshu âshâ âshō âshä âshe âshē âshi
âshu âshâ âshō âshä âshe âshē âshi (voiced)
âchu âchâ âchō âchä âche âchē âchi
âju âjâ âjō âjä âje âjē âji
âru ârâ ârō ârä âre ârē âri
âlu âlâ âlō âlä âle âlē âli
âmu âmâ âmō âmä âme âmē âmi
ânu ânâ ânō ânä âne ânē âni

3. ōpu ōpâ ōpō ōpä ōpe ōpē ōpi
ōbu ōbâ ōbō ōbä ōbe ōbē ōbi
ōtu ōtâ ōtō ōtä ōte ōtē ōti
ōdu ōdâ ōdō ōdä ōde ōdē ōdi
ōku ōkâ ōkō ōkä ōke ōkē ōki
ōgu ōgâ ōgō ōgä ōge ōgē ōgi
ōfu ōfâ ōfō ōfä ōfe ōfē ofi
ōvu ōvâ ōvō ōvä ōve ōvē ōvi
ōthu ōthâ ōthō ōthä ōthe ōthē ōthi
ōthu ōthâ ōthō ōthä ōthe ōthē ōthi (voiced)
ōsu ōsâ ōsō ōsä ōse ōsē ōsi
ōzu ōzâ ōzō ōzä ōze ōzē ōzi
ōshu ōshâ ōshō ōshä ōshe ōshē ōshi
ōshu ōzhâ ōshō ōshä ōshe ōshē ōshi (voiced)
ōchu ōchâ ōchō ōchä ōche ōchē ōchi
ōju ōjâ ōjō ōjä ōje ōjē ōji
ōru ōrâ ōrō ōrä ōre ōrē ōri
ōlu ōlâ ōlō ōlä ōle ōlē ōli
ōmu ōmâ ōmō ōmä ōme ōmē ōmi
ōnu ōnâ ōnō ōnä ōne ōnē ōni

4. äpu äpâ äpō äpä äpe äpē äpi
äbu äbâ äbō äbä äbe äbē äbi

ätu ätâ ätō ätä äte ätē äti
ädu ädâ ädō ädä äde ädē ädi
äku äkâ äkō äkä äke äkē äki
ägu ägâ ägō ägä äge ägē ägi
äfu äfâ äfō äfä äfe äfē äfi
ävu ävâ ävō ävä äve ävē ävi
äthu äthâ äthō äthä äthe äthē äthi
äthu äthâ äthō äthä äthe äthē äthi (voiced)
äsu äsâ äsō äsä äse äsē äsi
äzu äzâ äzō äzä äze äzē äzi
äshu äshâ äshō äshä äshe äshē äshi
äshu äshâ äshō äshä äshe äshē äshi (voiced)
ächu ächâ ächō ächä äche ächē ächi
äju äjâ äjō äjä äje äjē äji
äru ärâ ärō ärä äre ärē äri
älu älâ älō älä äle älē äli
ämu ämâ ämō ämä äme ämē ämi
änu änâ änō änä äne änē äni
5. epu epâ epō epä epe epē epi
ebu ebâ ebō ebä ebe ebē ebi
etu etâ etō etä ete etē eti
edu edâ edō edä ede edē edi
eku ekâ ekō ekä eke ekē eki
egu egâ egō egä ege egē egi
efu efâ efō efä efe efē efi
evu evâ evō evä eve evē evi
ethu ethâ ethō ethä ethe ethē ethi
ethu ethâ ethō ethä ethe ethē ethi (voiced)
esu esâ esō esä ese esē esi
ezu ezâ ezō ezä eze ezē ezi
eshu eshâ eshō eshä eshe eshē eshi
eshu eshâ eshō eshä eshe eshē eshi (voiced)
echu echâ echō echä eche echē echi
eju ejâ ejō ejä eje ejē eji
eru erâ erō erä ere erē eri
elu elâ elō elä ele elē eli
emu emâ emō emä eme emē emi
enu enâ enō enä ene enē eni
6. ēpu ēpâ ēpō ēpä ēpe ēpē ēpi
ēbu ēbâ ēbō ēbä ēbe ēbē ēbi
ētu ētâ ētō ētä ēte ētē ēti
ēdu ēdâ ēdō ēdä ēde ēdē ēdi
ēku ēkâ ēkō ēkä ēke ēkē ēki
ēgu ēgâ ēgō ēgä ēge ēgē ēgi
ēfu ēfâ ēfō ēfä ēfe ēfē ēfi
ēvu ēvâ ēvō ēvä ēve ēvē ēvi
ēthu ēthâ ēthō ēthä ēthe ēthē ēthi
ēthu ēthâ ēthō ēthä ēthe ēthē ēthi (voiced)
ēsu ēsâ ēsō ēsä ēse ēsē ēsi
ēzu ēzâ ēzō ēzä ēze ēzē ēzi
ēshu ēshâ ēshō ēshä ēshe ēshē ēshi
ēshu ēshâ ēshō ēshä ēshe ēshē ēshi (voiced)
ēchu ēchâ ēchō ēchä ēche ēchē ēchi
ēju ējâ ējō ējä ēje ējē ēji
ēru ērâ ērō ērä ēre ērē ēri
ēlu ēlâ ēlō ēlä ēle ēlē ēli
ēmu ēmâ ēmō ēmä ēme ēmē ēmi
ēnu ēnâ ēnō ēnä ēne ēnē ēni

7. ipu ipâ ipō ipä ipe ipē ipi
ibu ibâ ibō ibä ibe ibē ibi
itu itâ itō itä ite itē iti
idu idâ idō idä ide idē idi
iku ikâ ikō ikä ike ikē iki
igu igâ igō igä ige igē igi
ifu ifâ ifō ifä ife ifē ifi
ivu ivâ ivō ivä ive ivē ivi
ithu ithâ ithō ithä ithe ithē ithi
ithu ithâ ithō ithä ithe ithē ithi (voiced)
isu isâ isō isä ise isē isi
izu izâ izō izä ize izē izi
ishu ishâ ishō ishä ishe ishē ishi
ishu ishâ ishō ishä ishe ishē ishi (voiced)
ichu ichâ ichō ichä iche ichē ichi
iju ijâ ijō ijä ije ijē iji
iru irâ irō irä ire irē iri
ilu ilâ ilō ilä ile ilē ili
imu imâ imō imä ime imē imi
inu inâ inō inä ine inē ini

H. Incidental word building:

1. Combine bu and ub into bub
bup bâp bōp bäp bep bēp bip
bub bâb bōb bäb beb bēb bib
but bât bōt bät bet bēt bit
bud bâd bōd bäd bed bēd bid
buk bâk bōk bäk bek bēk bik
bug bâg bōg bäg beg bēg big
buf bâf bōf bäf bef bēf bif
buv bâv bōv bäv bev bēv biv
buth bâth bōth bäth beth bēth bith
bus bâs bōs bäs bes bēs bis
buz bâz bōz bäz bez bēz biz
bush bâsh bōsh bäsh besh bēsh bish
buj bâj bōj bäj bej bēj bij
bur bâr bōr bär ber bēr bir
bul bâl bōl bäl bel bēl bil
bum bâm bōm bäm bem bēm bim
bun bân bōn bän ben bēn bin

Use each initial consonant through the series as in Exercise H, 1.

2. pup pâp pōp päp pep pēp pip
pub pâb pōb päb peb pēb pib
put pât pōt pät pet pēt pit
pud pâd pōd päd ped pēd pid

—*etc.*—

3. tup tâp tōp täp tep tēp tip
tub tâb tōb täb teb tēb tib
tut tât tōt tät tet tēt tit
tud tâd tōd täd ted tēd tid

—*etc.*—

4. dup dâp dōp däp dep dēp dip
dub dâb dōb däb deb dēb dib

dut dât dōt dät det dēt dit
dud dâd dōd däd ded dēd did
—*etc.*—

Vowels may be added to the foregoing series as:

pupu pâpâ pōpō päpä pepe pēpē pipi
pubu pâbâ pōbō päbä pebe pēbē pibi
putu pâtâ pōtō pätä pete pētē piti
pudu pâdâ pōdō pädä pede pēdē pidi

Finals may be added as follows:

kups kâps kōps käps keps kēps kips
kut'n kât'n kōt'n kät'n ket'n kēt'n kit'n

I. Applying the meaning—write the list on the slate, *e.g.:*

but = but	kut'n = _____ (no word)	bud = bud
bât = bought	kât'n = _____	bâd = _____
bōt = boat	kōt'n = _____	bōd = bode
bät = bot	kät'n = cotton	bäd = _____
bet = bet	ket'n = _____	bed = bed
bēt = beat, beet	kēt'n = _____	bēd = bead
bit = bit	kit'n = kitten	bid = bid

J. Samples showing why speech-reading is easy by the Kinesthetic Method. The syllables have become second nature. These are merely mixed syllables:

it is tīm tö gō	It is time to go.
nan' si went tö tou"n	Nancy went to town.
giv mē ūr' bâl	Give me your ball.
ī luv thu bā' bi	I love the baby.
it is rān' ing	It is raining.
ī kan spēk'	I can speak.
ī kan tâk'	I can talk.
mā ī gō tö tou'n	May I go to town?
är gen tē' na	Argentina
stā tis' tiks	statistics
stā tis' ti kal	statistical
stat' is tish' an	statistician

Evaluation of the Kinesthetic Method

The report of a study of this problem follows closely upon a report of the previous problem, "Development of the Kinesthetic Method of Speech Development and Speech Reading." The problem here is to ascertain how well deaf pupils who have been instructed by use of the Kinesthetic Method compare, in certain outcomes, with other deaf pupils instructed by use of the method employed at the Tennessee School for the Deaf.

Two groups of deaf children were used, eight in each. Group I was taught by the writer by the Kinesthetic Method

an hour period each school day for the full school term, 1941–42. Group II was selected for comparison of the Kinesthetic Method and the method now in use in the Tennessee School for the Deaf. These groups were quite closely related in every respect except in age and time in school. Group II was in the fourth year in school, while Group I was in the third year in school. This should have given Group II a decided advantage over Group I. Ages of pupils were also in favor of Group II, as may be seen in Table I.

TABLE I

COMPARATIVE STATUS OF TWO GROUPS STUDIED

Child	*Date of Birth*	*Cause of Deafness*	*At Age*
Group I (Experimental): Admitted to Tennessee School for the Deaf on Sept. 24, 1939.			
A	July 14, 1933	Acute and chronic otitis media	1 yr.
B	Aug. 12, 1933	Spinal meningitis	3 yrs.
C	Nov. 16, 1933	Unknown	6 mos.
D	Nov. 7, 1933	Whooping cough and measles	5 mos.
E	Dec. 26, 1933	Congenital	
F	June 15, 1933	Congenital nerve deafness	
G	Oct. 9, 1934	Congenital	
H	Sept. 16, 1933	Congenital	
Group II (Control): Admitted to the Tennessee School for the Deaf on Sept. 15, 1938.			
I	Mar. 23, 1931	Infantile paralysis	7 mos.
J	May 31, 1933	Unknown	Infancy
K	Sept. 27, 1932	Congenital	
L	May 27, 1932	Congenital	
M	June 4, 1932	Congenital	
N	April 27, 1931	Whooping cough	6 mos.
O	Nov. 25, 1932	Congenital	
P	Aug. 21, 1930	Spinal meningitis	5 yrs.

Table I reveals that there were four cases of congenital deafness in each group, one unknown cause of deafness from infancy in one group and an unknown cause of deafness discovered at the age of six months in the other group, both of which we infer were congenital cases. Each group contained a spinal meningitis case, a case attributed to whooping cough (plus measles, in one instance), while one group had a case attributed to infantile paralysis and the other had a case attributed to acute and chronic otitis media.

The length of time of hearing in early life has a bearing on the foundation of speech in the deaf child. The total amount of hearing time in early life was four years and eleven months in Group I and six years and one month in Group II.

The two groups were closely related with respect to IQ. Table II shows a mean IQ. of 99 for Group I and 95 for Group II.

TABLE II

INTELLIGENCE QUOTIENTS OF TWO GROUPS STUDIED ACCORDING TO THE PINTNER-PATERSON SHORT-PERFORMANCE SCALE

Group I		*Group II*	
Child	*IQ.*	*Child*	*IQ.*
A	86	I	79
B	113	J	112
C	76	K	102
D	114	L	75
E	103	M	112
F	109	N	88
G	102	O	100
H	87	P	91
Mean	99		95

The audiograms for these children showed a fairly close relationship in the average amount of hearing between the two groups. A definite comparison could not be made, however, since the amount of hearing loss in terms of percentage is of no value.

The Tests.—Test I was given in May, 1941, near the close of the school term. Both vowels and consonants were given as single elements instead of in word form. The test for vowels and the test for consonants were given separately and scored separately. The scores are given in Table III. The vowel score and the consonant score are combined and the mean is taken. This shows Group II leading by a mean score of 5.0 for Test I.

The score is based on the number of vowels and the number of consonants correctly produced vocally from the printed form. Test I was given to each group by the same tester.

TABLE III

SCORES OF TWO GROUPS STUDIED ON TEST I
VOWEL-CONSONANT TEST

Group I			*Group II*		
Child	*Vowel*	*Consonant*	*Child*	*Vowel*	*Consonant*
A	11	18	I	15	18
B	9	19	J	16	5
C	5	20	K	15	20
D	9	17	L	16	12
E	15	6	M	17	20
F	14	19	N	17	16
G	12	20	O	15	19
H	2	17	P	15	17
Mean	9.63	17		15.75	15.88
Vowel-consonant mean		26.63	Vowel-consonant mean		31.63

Tests II and III were given by the writer with the aid of an assistant. The same person served as assistant in both groups. Test II was given in January, 1942. In both Test II and Test III three words were given for each vowel and three words for each consonant, initial, medial, and final. For example: *p*en, pa*p*er, to*p*, were tested for the consonant "p" and the score is based on the number correctly produced vocally. Thus, the perfect score for consonant "p" is 3.

TABLE IV

SCORES OF TWO GROUPS STUDIED ON TEST II,
VOWEL-CONSONANT TEST

Group I			*Group II*		
Child	*Vowel*	*Consonant*	*Child*	*Vowel*	*Consonant*
A	21	29	I	10	11
B	11	27	J	0	3
C	14	41	K	6	13
D	22	41	L	3	2
E	23	59	M	5	8
F	15	33	N	5	7
G	42	87	O	16	25
H	12	22	P	19	45
Mean	20	42.38		8	14.25
Vowel-consonant mean		62.38	Vowel-consonant mean		22.25

Similarly, the vowel test was given, *e.g.*, old, cold, so.[3] The possible individual score for the vowel test was 45. The possible individual score for the consonant test was 135. It must be remembered here that speech development for the deaf is a building-up process, and the perfect score must be obtained eventually if the child is to make good use of speech.

TABLE V

SCORES OF TWO GROUPS STUDIED ON TEST III, VOWEL-CONSONANT TEST

Group I			*Group II*		
Child	*Vowel*	*Consonant*	*Child*	*Vowel*	*Consonant*
A	25	64	I	12	45
B	29	78	J	9	38
C	34	90	K	19	54
D	30	80	L	5	34
E	30	107	M	16	71
F	35	98	N	8	51
G	44	112	O	18	69
H	24	70	P	24	45
Mean	31.38	87.38		13.88	50.88
Vowel-consonant mean		118.76	Vowel-consonant mean		64.76

Table IV shows the results of Test II. Group I shows an increase of 35.75 points over Test I, while Group II shows a score of 9.38 points less than that of Test I. This does not mean a decrease, however, since Test I was given as single elements and Test II was given in word form. These two tests show that Group I had made much greater progress than Group II, leading with a mean score of 40.13.

Test III was given on April 30 and May 1, 1942. The results are shown in Table V.

Group I shows a mean score gain of 92.13 for the school year. Group II shows a mean score gain of 33.13 for the school term. This shows a net gain of 59.00 mean score points made by Group I over Group II for the entire school term.

[3] The consonants and vowels in question were not underlined in the test, however; neither were the words marked diacritically.

Summary of Findings

A new form of the Jena Method of speech-reading was worked out and integrated with the Smith System of speech development, producing the Kinesthetic Method, in which speech development and speech-reading become one and in which the deaf child substitutes the sentient for the auditory experience. This relieves the child of all tension and nervous strain attending the old methods of lip-reading.

The closely related groups selected for experiment and comparison of results were called Group I and Group II. Group I was given one hour of instruction by the Kinesthetic Method each school day for a full term. Group II was taught by the common methods which are in general use.

According to the Pintner-Paterson Short-Performance Scale, Group I had a mean IQ. of 99 and Group II had a mean IQ. of 95.

Group I was in its third year of school, and Group II was in its fourth year of school.

Causes of deafness, as revealed by the data, were: (1) in four cases in each group, deafness was congenital; (2) in one case in each group the cause of deafness, discovered early, was unknown (probably congenital); (3) in one case in each group deafness was caused by spinal meningitis; (4) in one case in each group deafness was caused by whooping cough; (5) in one case in Group II deafness resulted from infantile paralysis; and (6) in one case in Group I deafness was caused by acute and chronic otitis media.

According to Test I, the mean score for Group I on vowels and consonants was 26.63; that of Group II was 31.63.

Test II on vowels and consonants resulted in a mean score of 62.38 for Group I and a mean score of 22.25 for Group II.

On Test III, vowels and consonants, the mean score for Group I was 118.76 and that for Group II was 64.76.

The mean score gain for Group I for the entire period was 92.13, while the mean score gain for Group II for the entire term was 33.13 and this despite the fact of an initial advantage in age and amount of schooling in favor of Group II.

From the foregoing results it may be concluded that the Kinesthetic Method has a decided advantage over the older methods of speech development and lip-reading.

The Adult Deaf of Franklin County, Ohio—Their Educational Background and Interests—I

JAMES THEODORE FLOOD, M.A.

Instructor in the Ohio State School
Columbus, Ohio

I. INTRODUCTION

WITHIN recent years there has developed a widespread movement for adult education. The movement, as such, dates from 1924 when Dr. Frederick P. Keppel, president of the Carnegie Corporation, called the first conference on adult education in New York. Subsequently regional conferences were held in other key cities and these culminated in a national conference at Chicago in 1926 at which the conference organized the American Association for Adult Education. The new organization as well as research undertaken following the first conference was financed by the Carnegie Corporation.

In 1927 and 1928 two books of very great significance to the adult educational movement came off the press. The books were a direct outgrowth of the New York conference of 1924. The first of these books was Dorothy Canfield Fisher's *Why Stop Learning?*[1] The book effectively focused public attention upon the adult education movement. The other book was Dr. Thorndike's qualitative study of adult learning ability.[2] Dr. Thorndike's study dispelled the popular delusion that old people could not learn.

With the rise of the "isms" during the great and prolonged industrial depression of the early thirties, the adult education movement gained impetus. Great numbers of people sought educational opportunities to find out for themselves solutions to the economic, political, and social

[1] Fisher, Dorothy Canfield. Why Stop Learning? Harcourt, Brace, and Company, New York, 1927.
[2] Thorndike, E. L., Adult Learning. The Macmillan Company, New York, 1928.

problems of the times. In 1939, Morse A. Cartwright[3] estimated that 22,000,000 people took advantage of adult educational opportunities in that year.

The adult educational movement lacked unified organization and direction until the inception of the American Association for Adult Education in 1926. During the years intervening between that time and the present, a certain co-ordination of effort has been achieved. The number of commercial, civic, and governmental agencies including the public schools participating, directly or indirectly, in sponsoring educational programs has steadily increased and the scope of these offerings has multiplied to such an extent that they now crisscross virtually every field of learning and are available to the people of every race, creed, and color within the boundaries of our great country. Nevertheless there are certain groups of people who are unable to share in those educational opportunities. Among these are the deaf, and, to a much lesser extent, the so-called deafened or "hard of hearing." These analogous groups are mentioned separately because they present an entirely different educational problem.

There are no reliable data as to the exact number of the deaf. The ANNALS for January 1940 gives a tabulation of all children in the 213 schools in the United States. The total given, as of October 20, 1939, is 20,507. The U. S. Census Bureau estimates the total at 48 in each 100,000 of the general population. Eichholz[4] mentioned 40,000 deaf-mutes in England and Wales. The *Silent Missionary*[5] for October 1940 estimates the total at 90,000 in the United States. The survey here reported on found 329 persons and interviewed 301 in Franklin County, Ohio, which has a population of approximately 375,000. Should we convert these figures into ratios, we would obtain the following general comparison:

[3] Cartwright, Morse A., Ten Years of Adult Education. The Macmillan Company, New York, 1935, p. 60.

[4] Eichholz, A., A Study of the Deaf in England and Wales. London, England: His Majesty's Stationery Office. 1932, p. 13.

[5] The Silent Missionary, Special Convention Number, vol. 17, no. 2, October 1940. St. Louis, Mo.

TABLE I
THE DEAF AND THE GENERAL POPULATION

This Survey of Franklin County	88:100,000
Eichholz Survey in England-Wales	90:100,000
Census Estimate for the United States	48:100,000
The *Silent Missionary* Estimate	68:100,000

It is evident from Table I that there is no agreement as to the exact proportion of the deaf to the general population. It is thought that the ratio found by this survey may have been exaggerated because the county is a metropolitan area and the deaf, characteristically, concentrate in such districts to take advantage of the employment and social opportunities not found in rural areas. It is possible that the ratio reported herein might tend toward the Census figure mentioned were other non-urban counties surveyed and the results averaged with urban area ratios.

Regardless of the differences noted, the fact remains that there are a large number of deaf people in the country and, because of their inability to hear, they are virtually shut out from most of the adult educational opportunities currently being offered to the public. A similar condition was noted by Eichholz in his study of the deaf of England and Wales:[6]

> The State has recognized the disabilities of deafness in children and provides for their education. . . . After the age of 16, no adequate provision is made for their care and the return in citizenship. . . . This attitude is unjust to a class of people who suffer the most extreme hardships of social isolation through life-long deafness and the countless difficulties in every activity of life that arise from it. National loss is also involved since natural aptitude, having no opportunity to develop, is frequently forced into inferior channels or wasted in idleness.

Eichholz's statement attempts to establish an economic justification for extending continuation educational opportunities to the adult deaf. There are, however, pedagogical, psychological, sociological, financial and other problems of importance which would have to be solved before any real equalization of educational opportunity could be considered. Again certain human factors would have to be weighed. For instance, are the deaf capable and desirous of taking ad-

[6] Eichholz, A., *Op. Cit.*, p. 5.

vantage of educational opportunities for adults? In regard to this, the *Volta Review*[7] reports a record of more than 600 deaf students who have undertaken work in schools for students with normal hearing. The ANNALS[8] gives a report of an adult evening school for the deaf of Kansas City, Missouri. The project (W.P.A.) started with 60 students ranging in age from 20 to 65. In subsequent years the enrollment increased to 76, 112, and then to 123 in 1937, the year the report was made. Marra, in summarizing his experience in directing the school, said:[9]

> . . . a deaf adult learns more readily than a pupil in a state school for the deaf . . . perhaps because maturity brings with it a greater respect for learning and a realization that knowledge means power and a better place in the economic order.

The 600 cases reported in the *Volta Review* and the report of the Kansas City project may show that the deaf are not only capable of taking advantage of educational opportunities when properly presented but that they are interested enough to form themselves into classes when an opportunity to do so is open to them.

Data pertinent to many aspects of the other problems might be found in school and other records. The immediate purpose of this report is to study the human factor and to delineate this further.

Statement of Specific Purpose of This Study.—This work was undertaken to ascertain the number of adult deaf of both sexes in Franklin County, Ohio, their social and economic status, their educational background and interests with reference to continuation classes, their preferences as to teachers, means of communication and courses, and their social, recreational, literary and religious interests.

The information obtained is for the general purpose of exploring the possibility of providing adult educational opportunities for the deaf consistent with their numbers, abilities, interests and needs.

---

[7] Timberlake, Josephine B., "Deaf Graduates—1938." *Volta Review*. vol. 40, no. 1, December 1938, p. 773.

[8] Marra, William J., "The Federal Adult Educational Project for the Deaf," ANNALS, vol. 82, no. 5, November 1937, p. 406.

[9] *Ibid.*, p. 410.

Limits of the Present Study.—This study is, frankly, extremely wide in its scope of inquiry into the personal affairs of the adult deaf. Regarding this point, Dorothy Hewitt says:[10]

> First and foremost, the adult education organizer must know the community and know it intimately. He must not only be in possession of the facts that may be gained from the Census, the Chamber of Commerce, the County Agent, or the Bureau of Labor Statistics—these are all valuable—but he must also acquaint himself with even more essential information, he must know the habits of the human beings with whom he would work.
>
> If an adult education leader is planning a program for young married women, she must know whether or not the economic status of the potential members of the new study group provides sufficient domestic service to permit being away from home in the afternoon or just before the dinner hour.

This survey did not cover children who at the time were pupils in either of the two schools for the deaf in Franklin County.

II. Review of Other Studies

In a search for similar or analogous studies, no record was found of any study which concerned itself with the attitude of the adult deaf toward continuation or adult education, their specific interests, nor their preference with respect to teachers, methods, means of classroom and everyday communication, and courses. It is, therefore, possible that this study is unique in some of these respects. Some studies were found, however, and from these information and techniques were borrowed and sometimes utilized in this work where found practical and pertinent. Among the more comprehensive of these studies of the deaf were:

A Study of the Deaf in England and Wales.—At the direction of the British Parliament, Dr. A. Eichholz, C.B.E., undertook an exhaustive study of the deaf of England and Wales. The survey required two years to complete. In his report of the survey to the Minister of Health and the President of the Board of Education, Eichholz states the purpose of his study as follows:[11]

---

[10] Hewitt, Dorothy, Adult Education: A Dynamic for Democracy. D. Appleton-Century Co., New York, pp. 30-31.

[11] Eichholz, A., *Op. Cit.*

In order to clear up the facts upon which various representations had been made to Parliament, to the Ministry of Health and the Board of Education, the present investigation was instituted in April, 1930, in the following terms:—

"To obtain fuller information than is at present available on the position in industry of deaf and dumb persons and of the facilities for their education and training and for securing employment."

In the present study, Eichholz has been quoted extensively and figures from his report have been used in drawing comparisons with the findings of this survey. In addition certain of his methods of obtaining information were used.

In describing the manner of obtaining his information, Eichholz says:[12]

The steps taken to acquire information have included personal visits to a number of urban and rural areas in order to get first hand touch with the deaf and dumb and those who supervise their welfare, consultation with Government departments concerned with the administration of the deaf, . . . with Local Education Authorities and Governing Bodies of voluntary schools for the deaf, . . . with the Teachers of the Deaf, with Public Assistance Authorities, . . . with voluntary associations for the welfare of the deaf and dumb, with medical practitioners . . . , with insurance companies and associations on the question of accident insurance and employers liability . . . , and with other bodies and individuals in this country and abroad having special knowledge in details affecting the welfare of the deaf.

This is quoted at length to show the nature and extent of the Eichholz survey. It is significant however that Dr. Eichholz did not mention having extensively consulted the deaf themselves. To quote him again on this point:[13]

From these two sources, the missions to the deaf and dumb and the public assistance authorities, I have obtained most of the facts relating to the adult deaf and dumb, information obtained from other sources being included as circumstances have allowed.

His report as a whole is divided into four parts covering general information, the education of the deaf, the deaf in adult life and the summary and conclusions. Excerpts and figures from the Eichholz report appear on other pages of this study.

The Deaf and the Hard of Hearing in the Occupational World.—This is the most comprehensive of the American

[12] Eichholz, A., *Op. Cit.*, p. 32.
[13] Eichholz, A., *Op. Cit.*, p. 92.

surveys of the deaf. The foreword of the survey report says:[14]

> When Federal funds were made available under the Civil Works Administration for the Employment of needy persons in the professional and technical classes, . . . the United States Office of Education was authorized to carry on an investigation related to the occupational possibilities of the deaf and the hard of hearing.

In the introduction:[15]

> The project was conceived primarily as a study related to the vocational guidance of deaf and hard-of-hearing young people. If handicapped children are to be helped to realize their greatest potentialities occupationally, one must know in which types of occupations handicapped adults are now most successfully engaged. One must know, too, the relationship of success in a given occupation to other factors, such as degree of deafness, command of speech, and education. These items must be coupled with a knowledge of the pupil as a person—his individual capabilities and interests. . . .

The report of the survey says that the project was but a sampling. It covered the more populous urban centers of most of the 48 states. It left out the sparsely settled group of agricultural states. The survey covered personal, occupational and employment information. Some items of information were concerned with the attitude of employers toward deaf workers. The survey reached some 19,576 deaf and deafened. The data obtained are extremely interesting. Two of the findings of the survey were:[16]

> The largest proportion of employment is found among both men and women of college education, and the smallest percentage among those having little or no school training.
>
> Those men who had no occupational training were unemployed to a significantly greater degree than those who had had such training.

The Taylor-Ohio Survey.—In 1934, Norman M. Taylor, field agent for the Ohio State School for the Deaf, made a survey of the younger adult deaf graduates and former

---

[14] Martens, Elise H., and Others, The Deaf and the Hard of Hearing in the Occupational World. Report of a survey directed by the U. S. Office of Education. Bulletin No. 13, 1936. Washington, D.C. p. vii.

[15] Martens, Elise H., and Others. *Op. Cit.*, p. 1.

[16] *Ibid.*, p. 38.

pupils of the Ohio School. Mr. Taylor said, regarding the specific purposes of his survey:[17]

> The purposes of this study are to find out how former students obtained their first employment. How many of them are working, what types of work they are doing, how long they remained in school, their ages at entering and leaving school, and their ideas of what changes are necessary for improvement in the school.

The study was conducted by mail using a questionnaire. Mr. Taylor obtained 250 replies to 389 letters sent out for a percentage return of 64. Fifteen questionnaires were obtained by personal interview.

The summary and conclusions of the Taylor report deal with the suitability of various occupations for the deaf in the light of the returns from the questionnaire. Some of Mr. Taylor's techniques have been borrowed for use in this survey.

Survey of the Adult Deaf of Maryland.—A survey of the adult deaf of Maryland was undertaken by a commision of prominent deaf and hearing persons of that state in 1933. The commission was headed by Ignatius Bjorlee, superintendent of the Maryland State School for the Deaf. The purpose of the survey, as stated in the report was:[18]

> —to make an investigation of the labor situation as it affects the deaf people of the state of Maryland and the conditions of the aged and infirm deaf of the State, with a view to establishing a home for them.

The survey resulted in obtaining information about some 525 adults. The summary of the report merely stated that the commission found 54 people in need of infirmary care and recommended the establishment of a special home to care for them. A significant point was the small number of colored people reported needing such care.

The survey was conducted largely by personal interviews. In commenting on the questionnaire by mail method, the report says:[19]

---

[17] Norman M. Taylor. An Analysis of the Vocational Functions of a State School for the Deaf. Columbus, Ohio: M.A. Thesis. The Ohio State University, 1934, p. 8.

[18] Bjorlee Ignatius, and Others, Survey of the Adult Deaf of Maryland. The Maryland State School for the Deaf, 1935, p. 3.

[19] *Ibid.*, p. 4.

Although the questionnaire appears to be simple, it was found to be decidedly unsatisfactory to request replies other than by personal solicitation.

The personal interview method used in the Maryland survey of the adult deaf was used effectively in this survey.

Returns from a Questionnaire of the Ohio Deaf-Mute Alumni Association.—In 1927 the Alumni Association of the Ohio State School for the Deaf made an attempt to gather data concerning the attitude of the deaf toward speech and lip-reading.[20] Ostensibly the purpose of the survey was to assemble data useful in effecting the transfer of the Ohio State School for the Deaf from the Welfare Department to the State Department of Education. Of 3,500 copies of a questionnaire distributed by various means, some 485 complete replies were returned. Questions relating to means of communication similar to those employed in the survey were included in this study. There were few conclusions drawn from the survey. The recommendation was that a further study be made to ascertain the effectiveness of the methods of educating the deaf then in use.

The Pennsylvania Society for the Advancement of the Deaf Survey.—This survey was undertaken by a committee of members of the Society. The survey attempted to secure information covering all the adult deaf of Pennsylvania. The final tabulation showed that 340 replies were received from 2,500 questionnaires distributed. The information sought by the questionnaires covered a wide range of items. The purpose of the survey, as stated in the report of the committee conducting it, was:[21]

. . . to secure information relative to the various conditions connected with the deaf, such information to be applied to such action or legislation to improve labor conditions. . . .

In the appendix of the report are a number of letters from employers of the deaf. The letters are testimonials of the efficiency and ability of the deaf workers employed. In the

[20] Berry, Charles Scott, "Returns from a Questionnaire of the Ohio Deaf-Mute Alumni Association." ANNALS, vol. 78, no. 2, March 1933, pp. 100-112.

[21] Special Bulletin of the Pennsylvania Society for the Advancement of the Deaf. Philadelphia, Pa., 1936, p. 1.

report, no conclusions drawn from the analysis of the data obtained could be found.

III. Procedures in Planning and Conducting This Survey

The solution of the problem which forms the basis for this investigation required careful search for methods of procedure which would assure the most favorable results. Sufficient replies to establish statistical validity and the necessity of obtaining adequate replies dictated the procedures employed. A careful review of the surveys mentioned above and also others indicated that the personnel of the survey committees, the method of solicitation, and the wording of questionnaires were contributing factors of the utmost importance to the ultimate success or failure of the research.

Significantly, the most successful of the surveys had the benefit of experienced personnel and included recognized deaf people, employed personal solicitation and were unhindered by the problem of wording a questionnaire so it would be understandable without personal explanation. These were the methods adopted for this survey.

In making out the questionnaire care was exercised to include items which would permit ready comparison with similar data solicited in other surveys. The completed questionnaire consisted of four mimeographed sheets stapled together at the upper left-hand corner.

Locating Names and Addresses.—The problem of ascertaining the number of deaf persons in Franklin County and of establishing contact with them was solved through checking the registration lists of pupils attending the State School for the Deaf for the previous twenty-five years, and the rolls of the Indianola Day-School since its founding. The rosters of the Columbus Branches of the National Fraternal Society of the Deaf and the National Association of the Deaf, the rolls of the local Columbus Advance and Ladies Aid Societies were also checked as were the records of the State Bureau of Vocational Rehabilitation, the Catalogue of

graduates and former students of Gallaudet College, the County Relief Rolls and the City Directory. The most prolific source of information on this part of the work was the deaf themselves. Each person contacted during the course of the survey was carefully questioned to obtain possible leads which would assist in obtaining additional names or addresses. In this manner it was ascertained that 401 deaf persons had at one time or another resided in Franklin County, Ohio.

Recording Data.—The actual recording of data was greatly facilitated by taking advantage of socials, picnics, and other gatherings of the adult deaf. At one of these affairs 27 interviews were made. Only four persons refused to give data. Of these, one didn't like the author, two were over suspicious and one would advance no reason. It was found easier to make contacts during the evening hours than during the daytime when people were often found to be away from home shopping, visiting, or at work.

The contacts established during the collection of data and observations made indicated further surveys could well be made to increase the meagre knowledge now possessed regarding the social conditions among the adult deaf.

IV. Appendix

Questionnaire

1. Name .....
2. Home address .....
3. Date of birth ..... Age .....
4. Sex: Male ..... Female .....
5. Race: White ..... Colored ..... Other .....
6. At what age did your deafness occur? .....

   Cause if not congenital .....
7. Marital status:
   Married ..... Single ..... Divorced ..... Separated .....
   (Wife) living .....
   (Husband)

8. Is (wife / husband) deaf? .....

9. No. of children ..... No. deaf .....

10. Lives alone ..... With family ..... With friends .....
With relatives other than family .....

11. School history:

a.

Name of School Attended	Length of Time	Age upon Leaving School	Grade Completed	Special Trade Training Received

b. By what method or methods of communication were you taught?
Speech ..... Lip-Reading ..... Signs .....

12. Means of communication now used:
a. When talking with hearing friends and relatives.
1. Speech exclusively ..... 3. Finger spelling-signs .....
2. Writing exclusively ..... 4. All means .....
b. When talking with deaf friends and relatives.
1. Speech exclusively ..... 3. Finger spelling-signs .....
2. Writing exclusively ..... 4. All means .....
c. When talking with strangers.
1. Speech exclusively ..... 3. Finger spelling-signs .....
2. Writing exclusively ..... 4. All means .....

13. Do you have enough hearing to help you in conversation? .....

14. Are you employed? ..... If so, what do you do on the job?
.....
.....
.....
.....
Is employment permanent? ..... temporary? ..... part-time? ..... Do you like your job? ..... If not, why not? .....
.....
.....
Do you receive the same pay as a hearing person for the same job? .....
If not employed, how are you supported?
Relief ..... Pension ..... By relatives .....

15. Are you interested in more schooling? ..... If so, which of the subjects listed below would you like to know more about?

Trades	*Academic Subjects*	*Hobbies*	*Other Subjects*
Bookkeeping ...	English	Coin collecting ..	Marriage .....
Typing	Reading	Stamp collecting	Health .....
Printing	Arithmetic	Model building ..	First aid .....
Beauty shop	Speech	Gardening	Child care .....
Shoe repair	Vocabulary	Card games	Insurance .....
House work	Lip-reading	Swimming	Religion .....
Auto repair	History	Camping	Budgets .....
Cooking	Civics	Hiking	Cooking .....
Farming	Other:	Tennis	Sewing .....
Other:		Golf	Interior decorating ....
		Other:	Menu planning ..
			Household repair .....
			Consumers' problems .....
			Nursing .....
			Other:

16. If you were to attend school again, which would you prefer: Deaf teachers ..... Men teachers ..... Oral classes ..... Hearing teachers ..... Women teachers ..... Manual classes .....

17. Days and times of week liked best for classes:

Monday	Mornings	One class meeting per week .....
Tuesday	Afternoons	
Wednesday	Evenings	Two class meetings per week .....
Thursday		
Friday		Three class meetings per week .....
Saturday		

18. Leisure-time activities:

Check the three most frequently engaged in:

Radio	Tennis .....
Movies	Hiking .....
Cards	Camping .....
Dancing	Golf .....
Swimming	Fishing .....
Walking	Club Work .....
Talking	

Games ..... Kinds of games .....
Reading ..... Kind of reading .....

19. Religion:

Catholic ..... Protestant ..... Other .....
How often do you attend church? .....

(To be continued)

Our Roll of Honor

IN CONTINUATION of the list published in the ANNALS for September, pages 299-303, there follow the names of other men and women on the staffs of schools for the deaf in the United States and Canada, or the sons and daughters, or husbands, of such staff members, who have joined the Armed Forces.

It is planned to keep this published list an open one, and the ANNALS will therefore be glad to include further names as they become available. These names should be sent in to the editor.

With the present additions, the number has now mounted to 138 persons, representing 44 schools. This does not include former pupils of schools for the deaf in active service.

That war inevitably takes its toll has already been sharply brought home. Word has been received that Lieut. Merrill C. Hinkson, whose mother, Mrs. Pearl Hinkson, has been an instructor in the Arkansas School for a number of years, lost his life in line of duty August 14, 1942 in an airplane accident. Lieutenant Hinkson was an instructor in the U. S. Army Air Force Basic Flying School, Bainbridge, Ga. To Lieutenant Hinkson, a reverent salute!

BALLOU, JUSTINE GUY, Ensign, U. S. Navy (son of Mrs. Winifred Ballou, Utah School).

BENSON, FRANK, Second Lieutenant, 63rd Infantry, U. S. Army (son of Mrs. Cecily Benson, Pennsylvania School).

BIONDI, ———, U. S. Army (son of Alexander Biondi, California School).

BRAUN, ALFRED F., 307th Engineers, U. S. Army (Pennsylvania School).

BUCK, FRANKLIN A., O.T.S., U. S. Army (Missouri School).

CAMPBELL, ELEANOR, Lieutenant, U. S. Army Nurses Corps (Ohio School).

CARNACHAN, GEORGE W., Lieutenant Colonel, Chemical War Service, U. S. Army (husband of Mrs. Marguerite Carnachan, Paul Binner School).

CAZIARC, DONALD R., Lieutenant, U. S. Army (Pennsylvania School).

CLENDENNING, WESLEY, Sergeant, O.T.S., U. S. Army (son of George Clendenning, Pennsylvania School).

CUBBIN, IRVING, Coast Guard, U. S. Navy (husband of Mrs. Ethel Jones Cubbin, Pennsylvania School).

DAYTON, HAZEL, Women's Army Auxiliary Corps (Wisconsin School).

DE MARAIS, MARSHALL R., Master Sergeant, Field Artillery, U. S. Army (son of Mrs. Alyss H. De Marais, Mitchell School, Chicago, Ill.).

DIERKS, A. G., U. S. Army (Ohio School).

GALLEN, HARRY, 26th Engineers, U. S. Army (Pennsylvania School).

HANDEL, JOHN, U. S. Army Air Forces (Pennsylvania School).

LECKIE, R. G., Lieutenant, Royal Canadian Artillery (husband of Mrs. R. G. Leckie, Mackay School).

LENAHAN, BERNARD T., U. S. Army (Pennsylvania School).

LEVY, SELMA M., Women's Army Auxiliary Corps (New Jersey School).

MCSWEENEY, MILES E., Cadet, Flight Officers School, U. S. Army Air Forces (son of John M. McSweeney, Pennsylvania School).

MULLEN, JOSEPH, U. S. Merchant Marine (husband of Mrs. Mildred H. Mullen, Pennsylvania School).

NIES, WILLIAM, CADET, U. S. Army Air Forces (son of Mrs. Maud H. Nies, New York School).

POINDEXTER, JEAN, Women's Naval Reserve, U. S. Navy (Virginia School).

PULLINGER, WALTER, Second Lieutenant, 335th Engineers, U. S. Army (Pennsylvania School).

REID, REXFORD, Sergeant, U. S. Army (Virginia School).

RICHARDSON, ———, U. S. Marine Corps (son of Mrs. Dorothy C. Richardson, California School).

RICHARDSON, ———, U. S. Army Forces (son of Mrs. Dorothy C. Richardson, California School).

SCHAFFER, ABRAHAM DAVID, 379th Infantry, U. S. Army (husband of Mrs. Lillian Schaffer, Mitchell School, Chicago, Ill.)

SOMMER, CLARENCE E., U. S. Army (Minnesota School).

TEUFEL, SPOTTSWOOD E., U. S. Army (son of Mrs. Hattie Teufel, Pennsylvania School).

TEUFEL, WILLIAM, U. S. Army (son of Mrs. Hattie Teufel, Pennsylvania School).

TURNER, JAMES A., Second Lieutenant, Signal Corps, U. S. Army (son of Mrs. Alice Turner, Pennsylvania School).

VULLING, PETER, U. S. Navy (Rochester School).

WENGER, FRED, Lieutenant, U. S. Army (Ohio School).

WODDROP, EDWARD MCSHERRY, Sergeant Pilot, Royal Air Force (son of Mrs. Eliza M. Woddrop, Junior High School 47, Deaf, New York City).

WODDROP, WILLIAM HARVEY, Signal Corps, U. S. Army (son of Mrs. Eliza M. Woddrop, Junior High School 47, Deaf, New York City).

From the Beverly School comes the report that one of its former pupils, George J. Cefalo, is now in the U. S. Army. Two former pupils of the Pennsylvania School, at Mt. Airy, are also in the service; they are Private Oliver Calipo (class of 1937), and Private Bert Clee (class of 1939), the latter now with the Army Tank Corps. Miss Ruth R. Yeager, B.A., 1936, Gallaudet College, is now with the Women's Army Auxiliary Corps.

Miscellaneous

I. S. F.

Seventy-Fifth Anniversary Celebration of the Clarke School.—In celebration of the Seventy-Fifth Anniversary of the founding of the Clarke School for the Deaf impressive exercises were held at the school, in Northampton, Mass., on the afternoon of Tuesday, October 20, 1942. The actual date of the establishment of the school was October 1, 1867.

Preceding the formal exercises, Mrs. Calvin Coolidge, president of the school board of trustees, accepted in a special ceremony on the lawn of the administration building the presentation of a new flagpole and American flag to the school. The program proper was held in Gilmore Gymnasium before an audience of educators and prominent citizens, and included the following order of events:

Mrs. Calvin Coolidge, president of the board of trustees, presiding.
Invocation, The Rev. Albert J. Penner, Holyoke, Mass.
Opening Remarks, Mrs. Coolidge.
Greetings, Dr. Frank H. Reiter, principal, Clarke School.
Greetings, The Hon. Walter W. O'Donnell, mayor of Northampton.
Greetings, Mrs. Alice M. Williams, for the Alumni Association.
Greetings, Dr. Elbert A. Gruver, president, American Association to Promote the Teaching of Speech to the Deaf.
History of the Clarke School, Miss Bessie N. Leonard, principal emeritus, Clarke School.
Personal Sketches, Dorothy Robbins and Richard Thompson, pupils in the advanced department of the school.
Response for the Trustees
Committee on Education, Dr. A. V. Galbraith, Easthampton, Mass.
Committee on Health, Dr. Gordon Berry, Worcester, Mass.
Committee on Finance, Mr. John Skinner, Northampton, Mass.
Anniversary Address, Dr. William Allan Neilson, president emeritus, Smith College.
America, recitation in unison.

Rudolf Pintner.—It is with deep regret the ANNALS makes note of the death on November 7, 1942 of Dr. Rudolf Pintner, professor of educational psychology at Teachers College, Columbia University. At the time of his death Dr. Pintner was in his 58th year.

The name of Dr. Pintner will always be associated with a new era in the education of the deaf. It was his activating

influence that set in motion the present-day scientific method of dealing with the problems specific to this field of education.

From the time of his appointment to the staff of the Ohio State University in 1913, Dr. Pintner took a special interest in the deaf, and out of this interest grew a host of studies touching many phases of psychology. These studies cast new and unerring light on such important questions as the native capacities of the deaf, the possibilities of their school achievement, the personality growth of deaf children, and the problems with which hard-of-hearing children must contend. His contributions in these fields to the scientific literature were many.

He wrote often for the ANNALS, presenting the results of studies always carefully protected by the tenets of scientific procedure. As recently as the past September issue appeared a preliminary report of a momentous experimental study under his direction by the National Research Council, on the value of individual hearing aids for hard-of-hearing children.

It was as professor of educational psychology in Teachers College, Columbia University, since 1921, that his influence on work with the deaf became pronounced. There in his courses he expounded the psychology of deafness as determined by carefully planned test and experimental observation. Much of this study he initiated himself; much of it was carried out under his supervision by his devoted students. His influence in this direction was further felt in his textbooks, where he always gave a prominent part to thought of the problems of the deaf and the hard of hearing, and in his addresses at meetings of the Convention of American Instructors of the Deaf and of the Conference of Executives of American Schools for the Deaf. He also took a conspicuous leadership in all the conferences called by the National Research Council on the problems of deafness. It is no small tribute to add that few modern studies of deafness are brought to completion without some reference to the body of literature that came from the pen of Dr. Pintner.

The sum of all his studies found Dr. Pintner with the

philosophy that handicapped children were fundamentally children like other children, with every right to a share in the common heritage of childhood.

To his students, his co-workers, and the great number of friends he had among educators of the deaf, Dr. Pintner endeared himself by his ever-cordial sincerity of manner. The editor of the ANNALS over many contacts came to know Dr. Pintner as a personal friend, and the feeling over the loss of such a friend is not easily described. There is, however, the satisfaction of knowing that when the roll of great names in the education of the deaf is called—de l'Epée, Sicard, Heinicke, the Gallaudets, Bell—there will be added the name of Rudolf Pintner.

Certification.—The following names are to be added to the lists previously published of those who have entered application for teacher certification with the Conference of Executives of American Schools for the Deaf. This brings the total to 1,260.

Effie W. Anderson, Texas School
Dorothy Dean Baldwin, New Jersey School
William F. Bruns, Texas School
Annie May Clark, Georgia School
Albert Walter Douglas, American School
Miriam Michaels Johnson, Texas School
Euphemia Lawrence, New Jersey School
Selma M. Levy, New Jersey School
Martha Alice Lusk, Paris, Mo.
Christine Webster Martin, Texas School
Lois W. Miller, Indiana School
Helen Porter, New Jersey School
William Burton Rogers, Kansas School
Jack Martin Staehle, New York School

Fate of the Philippine School.—From the American Red Cross has come some information, though fragmentary, concerning the Philippine School for the Deaf and the Blind, located at Pasay, Rizal, on the outskirts of Manila. According to word received from the Office of the High Commissioner of the Philippines in the Department of the In-

terior, the school was in operation up until December 7, 1941. There were no Americans on the staff of instruction at that time.

From another source, one who returned to this country on the exchange vessel, the *Gripsholm,* the American Red Cross learned that the place no longer functioned as a school, but served instead simply as a refuge for the deaf and blind children. A rice allotment for the school was among the list published in the papers. This informant also said that parts of the school were being converted into a hospital for wounded Japanese.

Community of Interest among the Deaf.—A brief item in *The Deaf Talkabout,* February-June 1942, the organ of the deaf of Victoria, Australia, illustrates the kinship of interest among the deaf regardless of geography. One cannot avoid the thought that the stronger this spirit of solidarity, the more certain it is their welfare will be safeguarded.

The item follows.

> On 14th May, we had Private Fortune of the U.S.A. Military Forces who gave us a talk on America and the American Deaf, which was very interesting. Many questions were asked which were in the nature of comparison between American and Australian activities for the Deaf. Private Fortune's parents are deaf, hence his coming to see and talk to us.

The father of Private Fortune was the late Rev. Roma C. Fortune, Episcopal Missionary to the Deaf, diocese of North Carolina.

A Collection of Railroad Pictures for School Use.—The Association of American Railroads, Transportation Building, Washington, D.C., has available for schools a Teacher's Kit on railroad transportation. This collection contains a packet of more than 50 pictures depicting various stages of railroad activity, including historical reference material; a booklet of 68 pages entitled The Stories Behind the Pictures; and a Teacher's Manual for primary and intermediate grades, with bibliography. For teachers who would be interested, this material could be turned to excellent use in the study of geography and related fields. School officers, teachers and

librarians may obtain copies of the set by writing to the address given above.

Hearing and Automobile Driving—In one of a series of articles appearing in the *Washington Post* on activities in encampments of the military services, Marshall Andrews, staff reporter for that newspaper, came upon a bit of information that has a bearing on the question of the deaf and the automobile. Describing, in an account in the May 4, 1942, issue, how field artillerymen are trained, he gives the following picturesque details:

> In the firing batteries every man is taught to be both cannoneer and truck driver, just as every cannoneer is taught to fill any place in the gun crew. When a new contingent arrives, the experienced truck drivers are given immediate tests and, if they qualify, are issued driver's permits. They drive the battery's vehicles until new drivers can be taught, then they are relieved and placed in gun crews for training.
>
> Before a man gets a permit to drive a Replacement Center vehicle he passes a test which makes the average State driver's permit test look like kindergarten stuff. He is tested, on equipment designed here and built from scrap metal, for color blindness, visual acuity, depth perception, speed of reflex, sensitivity to light, nervousness and angle of vision. If he passes that test and can give a convincing demonstration of his driving ability, he is issued a permit.

It is to be noted that in the requirements listed for this exacting type of driving no reference is made to special requirements of hearing. This gives forceful point to the contention of the deaf that the sense of hearing is not essential for ability to operate a motor vehicle successfully.

Positions in the Federal Civil Service for the Deaf and the Hard of Hearing.—In the May ANNALS two lists, Forms 1786 and 1786a, were published naming positions in the U. S. Civil Service for which the deaf and the hard of hearing may be considered for appointment. Advice has since been received from the executive assistant of the Civil Service Commission that additional positions are being surveyed with the view of determining whether physically handicapped persons, including the hard of hearing and presumably the deaf, can be placed in these positions. This would of course necessitate revision in the near future of the lists described in Forms 1786 and 1786a.

Charts of Sound and Hearing.—Those persons interested in the physical elements of sound and their application to the sensation of hearing will be glad to know that Maico Company, Inc., 2632-36 Nicollet Avenue, Minneapolis, Minn., have issued two charts, one called Sound Frequency Characteristics, and the other Human Hearing. These are instructive schematic representations of intensity and frequency characteristics of the experiences one may be subjected to in hearing. For the worker in acoustic training these charts will prove invaluable aids. They are distributed with the compliments of the company.

Phi Delta Kappa.—Prominent as an organization promoting research and emphasizing the ideals of service and leadership in all areas of education is Phi Delta Kappa, a professional fraternity in education, with some 40 active campus and regional chapters. All chapter activities move about the triad of ideals—research, service, leadership, while the fraternity as a whole concentrates upon the same principles through a number of constructive undertakings. One of these is the publication of *The Phi Delta Kappan,* official national organ and vehicle by which it keeps the major principles always to the fore. This journal is now in its 25th volume. The fraternity has for some time assumed the sponsorship of *Educational Abstracts,* a great professional service in itself. It is presently undertaking the preparation, under the most skilled editorship, of a *Dictionary of Education,* which when completed will be a monumental work.

It is our pleasure to record that a number of educators of the deaf maintain active membership in the fraternity, a symbol of the fact that our special field of work is an integral part of the great major enterprise of education. A recent count showed the following names, chapters and school positions. There may be others that should be included, but for the time being they are not known to the editors of the ANNALS. It is a fact of further interest that two of the names in the list are those of deaf men, both graduates of Gallaudet College.

E. R. Abernathy, *Sigma,* superintendent of the Ohio School
Richard G. Brill, *Lambda,* recently principal in the Virginia School
Tobias Brill, *Alpha Pi,* principal in the New Jersey School
Fred E. Cobb, *Alpha Kappa,* instructor in the Tennessee School
Irving S. Fusfeld, *Beta,* dean of Gallaudet College
Robert M. Greenmun, *Sigma,* instructor in the Ohio School
LeRoy D. Hedgecock, *Alpha Mu,* instructor in the New Jersey School
Marshall S. Hester, *Lambda,* supervising teacher in the California School
H. H. Hutchinson, *Sigma,* principal, industrial department, Ohio School
William J. McClure, *Beta Gamma,* assistant professor, Gallaudet College
Robert D. Morrow, *Alpha Zeta,* formerly superintendent, Arizona School
Roy F. Nilson, *Sigma,* principal, academic department, Ohio School
Roy G. Parks, *Lambda,* principal in the Georgia School
John W. Shaver, *Beta,* instructor in the Texas School
Roy Moore Stelle, *Beta Gamma,* recently supervising teacher in the Illinois School
Herschel R. Ward, *Alpha Kappa,* principal in the Tennessee School
J. C. Welles, *Alpha Kappa,* instructor in the Tennessee School
Harley Z. Wooden, *Beta,* superintendent of the Michigan School

The Fenestration Operation in Otosclerosis.—Among late advances made in otology, one, the practice of fenestration in the middle ear, has since 1938 assumed unusual importance. Recent efforts have shown that practical results have followed as the outcome of that kind of intervention. In the *Journal of the American Medical Association,* May 16, 1942, Dr. George E. Shambaugh, Jr., widely known otologist, reporting in an article on "Otosclerosis—Results with the Fenestration Operation After Three and One-Half Years," explains that hearing may be partially restored, perhaps permanently, in cases of otosclerosis by a surgical process which opens up a new window to take over the function of the oval window obliterated by the otosclerotic accretions. The technique for the operation is minutely described.

According to the article, the pathology of otosclerosis takes the following course.

> Otosclerosis is a unique disease of bone found only in man and is confined exclusively to the bony capsule surrounding the inner ear. The pathologic lesion of otosclerosis consists of a rather sharply localized focus of vascular, spongy, newly formed bone that appears in the dense, ivory-like labyrinthine capsule. Routine examination of the temporal bones at autopsy reveals an otosclerotic focus in about 1 out of every 20 to 25 adults [according to Dr. S. J. Crowe]. This focus occurs most often just anterior to the oval window. As it slowly enlarges it tends to grow across the annular ligament onto the foot

plate of the stapes in the oval window, until finally the stapes becomes firmly ankylosed to the margins of the window and the window is virtually obliterated.

"The loss of hearing by patients with otosclerosis," says Dr. Shambaugh, "is due to the stapes ankylosis which prevents air-borne sounds from being carried by the drum membrane and ossicular chain to the inner ear. With the oval window obliterated, only sounds loud enough to cause the skull to vibrate can be carried directly through the bone to the inner ear and be heard." The window operation in the middle ear is suggested in cases of stapes ankylosis when there is sufficient loss of hearing ability to be considered a handicap and when the auditory nerve itself is intact with respect to the conversational frequencies. Obviously there would be no meaning to opening a new window to the inner ear if the conducting nerve has been rendered inactive. Sensitivity of the nerve of hearing can readily be determined by the usual bone-conduction hearing tests. Other conditions preliminary for the fenestration operation are that the patient should be in good health, the drum membrane must be intact and the ear must be free of active or recent inflammation. It is necessary also that the poorer hearing ear be chosen for the operation so that if the process is not successful no unnecessary net loss of hearing will be incurred.

Among the conclusions noted by Dr. Shambaugh are these:

1. The fenestration or window operation contains promise of at least partial recovery of hearing previously lost by stapes fixation and obstruction of the oval window.

2. A successful surgical technique seems to have been evolved.

3. Successful intervention with this technique seems to result in a gain in hearing surpassing that obtained with a hearing aid.

4. Since a successful issue is not yet always the outcome, it is necessary to select the poorer hearing ear for the operation.

5. If an improvement is noted after the operation the gain may be considered as probably permanent if it is maintained for more than six months.

6. When properly performed the operation presents little risk to life, health or hearing. For instance, out of 147 consecutive operations performed by Dr. Shambaugh on 117 patients there were no fatalities and no serious after-results.

7. In a three-and-a-half year period ending December 11, 1941, the 117 patients referred to now show, after treatment by the technique described, "a significant hearing improvement."

History of the Alabama School.—An informative booklet has been published by the Alabama School called "A Historical Sketch of the Alabama Institute for Deaf and Blind," the author and compiler being the superintendent of the institution, Dr. J. S. Ganey. In its 82 pages is shown first how the school was established, with the department for the deaf as the original nucleus, to which were added the department for the blind and then the school for the Negro deaf and blind. The human character of the undertaking is indicated by this description of its start:

> The Alabama Institute for Deaf and Blind had its beginning, like many another larger enterprise, in a small way. In the early 1850's Dr. Joseph H. Johnson, who was a practising physician in Western Georgia, decided to seek a place of residence elsewhere. Dr. Johnson suffered from asthma. It seems that he was looking for a home in the mountains where the air would be lighter and purer. He finally settled in Talladega where he engaged the second floor in what is now known as Manning Hall, or the administration building of this institution. He had brought his family, including his little deaf brother, Seaborn, along with him. Here he settled down to practise medicine, but destiny decreed that he should serve humanity in another field and in a short time there were gathered about him a few deaf children from various sections of Alabama, and thus a school for the deaf was born. In October, 1858, the first class met in the same building where Dr. Johnson and his family were domiciled.

The story also makes clear that the sturdy personality of the founder, Dr. Johnson, who directed the destinies of the school from its beginning until his death in 1893, and of his son and successor, Dr. Joseph H. Johnson, Jr., who was head of the school for the twenty years following, contributed largely to its growing strength as one of the outstanding schools of the country.

Further recognizing that the human factor is the element of greatest importance in a school, the history makes record

of the personnel, listing all superintendents, principals, instructors and other officers, in all the school departments, at the same time describing the function of their departments as part of the total institution activities. A further description of the school at work, the buildings both past and present, how the school is supported, service and roll call of the trustees since 1860, and a compendium of special incidents of interest, complete a very readable story, illustrated generously with pictures.

The school in its development has striven to keep abreast of the best practices. To the credit of the school there is further tribute when the sketch quotes from the report of a recent survey by outside authorities:

> "His immediate assistants (the Superintendent's), that is, the school principals, the business manager, the director of vocational training, and the head matrons, are men and women of fine human sensibilities, responsive to the best needs of their respective positions. The visiting group was struck with the high-minded character of these persons, and there was ample evidence that this character was reflected in the conduct and bearing of the children enrolled in the school."

Hearing Survey in Public Schools of Delaware.—The Division of Special Education and Mental Hygiene of the Wilmington, Del., Board of Public Education has issued a report on An Investigation of the Acuteness of Hearing of Children in the Delaware Public Schools by Means of the 4-A Audiometer (Phono-Audiometer), by Virginia S. Wallin, psycho-educational examiner in the Delaware Department of Public Instruction, and Dr. J. E. W. Wallin, director of special education and mental hygiene for the Delaware Department of Public Instruction. This was a three-year study made possible by a grant from the Delaware Citizens Association to the Division, and summarizes results for 24,932 white and colored Delaware public school children above the second grade tested by the Western Electric 4-A Audiometer, that is, phono-audiometer.

The proportion found auditorially defective, that is, with hearing deficient to the extent of 9 or more sensation units in one or both ears, including also a small number in whom all the data justified suspicion of defective hearing, was 5.0 per cent. This was the group for whom individual re-testing

and possibly otological examination were recommended. Lip-reading was recommended for practically 2 per cent of the total number of children examined. Many of the smallest rural schools seemed to show the largest percentage of cases of hearing defect, a condition true for both the white and the Negro children. For instance, quoting from the report:

> Among the whites the percentages are: 16.2% in the two-teacher schools, followed by 9.3% in the three-teacher, 9.2% in the one-teacher, and 8.6% in the four-teacher schools. In the colored schools the corresponding percentages are 17.6% in the two-teacher schools, 12.0% in the three-teacher schools, and 7.3% in the one-teacher schools.

The report also found generally a higher incidence of hearing defect among Negro children than among white children. Hypacousic children in the city of Wilmington were decidedly more prevalent among the younger pupils (grades III to VI) than among those in grades VII to XII. There seemed also to be a slightly higher incidence for boys than for girls.

Included in the report are extensive tabular data, as well as comparative information on a group of children tested a second time, the first in 1937 and again in 1939, and for this latter group the results of follow-up work are explained.

The investigation had hoped to obtain evidence concerning the intelligence and school achievement of hypacousic children as compared with other children in the same grades and schools, but owing to various difficulties the final data obtainable did not justify any definite conclusions in this field. The report does, however, review recent studies made by Pintner and Lev in which no basic difference in intelligence was found between normal and hard-of-hearing children, though the latter were handicapped in the acquisition of language.

The report is an earnest study and is well worth careful reading. A copy may be secured from the Division of Special Education and Mental Hygiene, Board of Education, Wilmington, Del., for 30 cents, prepaid.

Spontaneous Lip-Reading.—The British church quarterly magazine for the deaf, *Ephphatha,* October-December 1942 issue, carried this morsel which in turn it had taken from another English paper. It illustrates a practice in spon-

taneous lip-reading common to many hearing persons when there is an otherwise intervening obstacle to oral communication.

MR. CHURCHILL AND "LIP-READING"

At the end of one of his big speeches in the House of Commons when everybody was cheering, Mr. Churchill was seen waving to his family in the gallery. "It was Miss Mary Churchill who first noticed her father's signals. Her lips moved as if she was speaking a message for her father to get by lip-reading. I do not know whether Mr. Churchill can lip-read, but he looked very pleased with his family's signalled congratulations." (*The "Evening Standard," July 3rd, 1942.*)

Theater for the Deaf in Spain.—An Associated Press item appearing in the *Washington Post,* November 17, 1942, tells of an effort by the deaf of Madrid, Spain, to maintain an active interest in the theater.

Spain's first theater for deaf-mutes starring deaf-mute actors and actresses opened in Madrid recently under the auspices of Catholic Action.

Weekly performances of popular plays rewritten for the deaf-mutes' language of hands are advertised the preceding week in the deaf-mutes' weekly newspaper, "The Voice of Silence."

Deaf groups in the U.S.S.R. have for a number of years also had their own theater movement, with their own actors and their own stage.

THE BARRY FIVE-SLATE SYSTEM

One of the Best and Most Scientific Systems of Teaching Language to Deaf Children

PRICE $2.50 NET

Send Orders to

THE COLORADO SCHOOL FOR DEAF AND BLIND

COLORADO SPRINGS, COLORADO

BOOKS FOR THE DEAF

By Margaret J. Stevenson

THE LIFE OF JESUS (Revised)
For Primary Classes. Cloth; Price, 25 cents net.

PRIMARY GEOGRAPHY, NUMBER I (Revised)
Cloth; Price, $1.00 net

PRIMARY GEOGRAPHY, NUMBER II
Cloth; Price, $1.00 net

NATURE FACTS (Revised)
Used correlatively with Primary Geographies.
Cloth; Price, 75 cents net

Send All Orders Direct To

MARGARET J. STEVENSON, OLATHE, KANSAS

"TALKS AND STORIES"

Contains nearly a hundred short stories and seventy-five conversations for practice in language, prepared by William G. Jenkins, M. A. Single Copy, 50c.

"WRITTEN EXERCISES ON DIRECT AND INDIRECT QUOTATIONS"

By J. Evelyn Willoughby, late instructor in the Clarke School. Single copy, 40c.

"THE STORY OF AMERICA FOR LITTLE AMERICANS"

By Grace M. Beattie, Instructor in the Colorado School. New Edition. Price, single copy, $1.00.

Published by the

AMERICAN SCHOOL FOR THE DEAF, West Hartford, Conn.

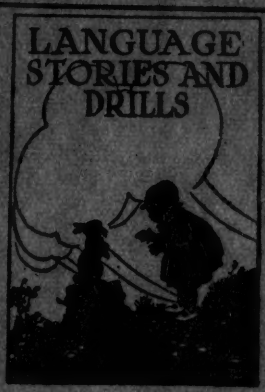
STRAIGHT LANGUAGE FOR THE DEAF

BY EDITH FITZGERALD

Third Edition (Revised) Price, $3.15 postpaid.

Order from

THE STECK COMPANY, Austin, Texas



"Language Stories and Drills"

Books I, II, III, and IV

Gertrude W. Croker, Mabel K. Jones and M. Evelyn Pratt

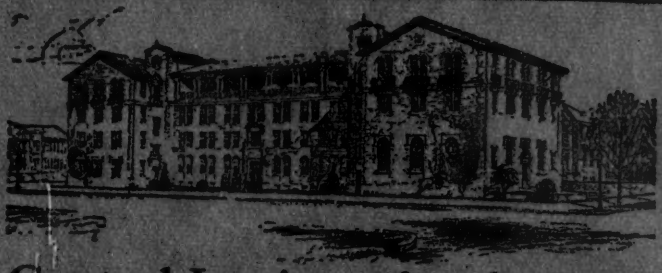
Illustrated by Tony Sarg

Price per copy, $1.25

Teachers' Manuals, $.50 Postage not included

Send orders to

CROKER, JONES & PRATT
Public School 47, 225 East 23rd St.
New York City



Central Institute for the Deaf

NATIONAL RESIDENTIAL AND DAY SCHOOL
FOR THE DEAF AND DEFECTIVES IN SPEECH

Approved by Advisory Council of Foremost Ear Specialists and Educators

New fire-proof buildings beautifully located opposite Forest Park. Modern Dormitories and Equipment. Best home environments. Pupils constantly in care of teachers or experienced supervisors.

ORAL SCHOOL FOR DEAF CHILDREN. C. I. D. offers all advantages of exclusively Speech Training and daily expert medical supervision of both Resident and Day Pupils. Education and Training from Kindergarten (three years of age) to College.

CLASSES FOR HARD-OF-HEARING CHILDREN. A new department has been established for the special training of Hard-of-Hearing children in Lip-Reading and Speech; all grades. Salvaging of Residual Hearing is a specialty of the Institute. The Acoustic Method was created here.

LIP-READING INSTRUCTION FOR ADULTS. Private and Class Instruction for the adult deaf. Conversational Classes for advanced pupils.

CORRECTION OF SPEECH DEFECTS. Correction of Imperfect Phonation, Indistinct Articulation, Lisping, Stuttering, Stammering and Aphasias.

TEACHERS' COLLEGE. This department of the Institute is a Unit of Washington University and accepts applicants with adequate college qualifications. Two years' training with graded special curriculum constitutes the training course. Graduates receive degrees of Bachelor of Science in Education from Washington University.

Founded by the late Dr. Max A. Goldstein
For further information address
Dr. Helen Schick Lane, Principal
818 S. KINGSHIGHWAY, ST. LOUIS, MO.

LOGICAL SYSTEM OF LANGUAGE-TEACHING
and
AN ANALYSIS OF THE ENGLISH LANGUAGE

by

MARIETTA RECTOR VINSON

A clear, concise presentation of the language principles and other facts of the English language. A system of language-teaching which demonstrates every requirement of the language.

This book answers the language needs of every school for the deaf. The analysis of language made from the standpoint of the needs of the deaf pupil and the requirements necessary to thoroughness; the system which interprets every phase of language, the vocabulary which distinguishes language principles. The outlines of various uses of language principles as well as certain divisions of language, the clarity of the system in conveying facts to the pupil—all combine to make a book which eliminates the ages-old confusion in application of a system, fragmentary work, and hazy conceptions by the pupil. The teacher who is not satisfied with the results of her work in language teaching will find in this book what she needs to secure satisfactory results.

TWO BOOKS IN ONE

Price, $6.00 postpaid

Discount: 5 to 9 copies, inclusive, 20 Per Cent

10 copies and up, 33-1/3 Per Cent

(When ordered directly from the author)

Send orders and inquiries to M. Vinson, P.O. Box 236, Berkeley, California

BOOKS FOR USE IN SCHOOLS FOR THE DEAF

English Book I, for Upper Primary Grades..... $ .60
English Book II, for Intermediate or Grammar Grades..... .60
English Book III, for High-School Grades, and a self-instructor.... .75
First Lessons in Geography, by Grace M. Beattie of the Colorado School 1.00

Published by the
STATE SCHOOL FOR THE DEAF
Columbus, Ohio

GEORGE BANTA PUBLISHING COMPANY, MENASHA, WISCONSIN